

# Alternatives<sup>®</sup>

FOR THE HEALTH-CONSCIOUS INDIVIDUAL

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Special Report



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## Boost Your Memory and Brain Power

Alzheimer's appears to be one of the diseases linked to our "civilized" lifestyle. In the U.S. alone more than four million people over the age of 65 suffer from progressive memory loss and the mental deterioration associated with Alzheimer's disease. In less-developed areas of the world like Africa the disease is practically nonexistent, which leads one to suspect that exposure to environmental pollutants and the unnatural food products so prevalent in our diets today play a critical role in this and other modern diseases.

Eating more fruits, vegetables, whole grains, and fresh-pressed oils may seem like too simple a solution for diseases that baffle even the most learned medical experts. But as our foods become more processed and adulterated, I believe simple, whole, natural foods and nutritional supplements will provide future "cures." Curcumin is one.

### CURCUMIN

We have known for a while that regular use of NSAIDs (nonsteroidal anti-inflammatory drugs) could decrease Alzheimer's risk, but the long-term side effects, such as gastrointestinal bleeding and liver and kidney damage, make this a poor trade-off. Recently, initial animal studies at the University of

California demonstrated that amyloid plaques that develop in the brains of Alzheimer's patients were reduced by more than 40 percent in animals that were fed curcumin. Additionally, there was less inflammation and free-radical damage in the brain. (*J Neurosci* 01;21(21):8370-7)

I've been writing about curcumin and turmeric for years. Curcumin is a component of curry, a spice commonly used in Indian culture and Ayurvedic medicine. India has one of the lowest rates of Alzheimer's disease in the world.

### ACETYL-L-CARNITINE

Research suggests that the progression of Alzheimer's disease can be slowed by increasing the acetyl-L-carnitine in the diet. Researchers studied 130 Alzheimer's patients from ten hospitals for one year. Sixty-three were given supplemental acetyl-L-carnitine, and 67 were given a placebo. Both groups worsened, but those in the treated group had a slower rate of deterioration. **Those on acetyl-L-carnitine had better logical intelligence, verbal critical abilities, long-term verbal memory, and selective attention; and no significant side effects were observed.** (*Neurology* 91;41(11):1726-

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32) This study suggests that Alzheimer's patients don't produce adequate amounts of acetyl-L-carnitine.

The process of creating acetyl-L-carnitine begins with the transformation of the amino acid lysine by the liver. To create and use this compound, your body needs a healthy liver, sufficient lysine, and adequate amounts of certain nutrients.

## A HEALTHY LIVER

The liver is your largest internal organ, and it performs some of the most complex chemical tasks. One of its primary roles is to detoxify the pesticides, pollutants, alcohol, and medications that produce a constant stream of harmful byproducts.

If liver function is normal, acetyl-L-carnitine levels can be increased by eating lysine-rich foods: cottage cheese, dark-meat chicken (the leg contains five times more than the breast), fish, peanuts, pumpkin and squash seeds, lima beans, chick peas, lentils, soybeans, and instant skim milk.

The amino acid L-lysine is available in supplement form. **I recommend starting with 500 mg per day, working up to 2,000 mg per day.** If you can't find L-lysine supplements in health food stores, you can try Vitality Fit (888-485-5851 or [www.primev.com](http://www.primev.com)) or Jo Mar Laboratories (800-538-4545 or [www.jomarlabs.com](http://www.jomarlabs.com)).

## AN UNHEALTHY LIVER

When the liver is not healthy, it starts to degenerate and disrupt many vital functions, including the conversion of lysine. Fortunately, a natural extract from the seeds of the milk thistle plant has been shown to trigger the regeneration of liver cells. (*Wiener Klinische Wochenschrift* 80;(19)678-683) (*Arzneim-Forsch.* 73;23:161)

A 70-percent extract of the herb *Silybum marianum*, known as **silymarin**, appears to be most effective. No toxicity problems and only minor temporary side effects (headaches or stomach upset during the first few days on the extract) have been reported. Improved liver function often occurs in as little as two weeks, and restoration

of full enzyme activity may occur in the first 30 days. **Recommended dosages range from 150 to 300 mg taken three times daily.** Silymarin extract should be taken as long as positive results are experienced or as long as a doctor feels it's necessary. Several companies market standardized silymarin extracts. Enzymatic Therapy Inc. makes an excellent product called Silybin Phytosome. To find a health food store in your area that sells it, contact Enzymatic Therapy at 800-783-2286 or [www.enzy.com](http://www.enzy.com).

## B VITAMINS ARE IMPORTANT, TOO

Vitamins C, B6 (pyridoxine), B3 (niacin), and B5 (pantothenic acid), iron, and the essential unsaturated fatty acids are essential for producing lysine. **Just recently I learned from an unpublished study that 50 percent of a group of patients thought to have Alzheimer's were only deficient in one or more B vitamins!**

**And as little as 200 mg of vitamin C has been shown to raise carnitine levels.** (*Nut Rep Int* 87;37:941)

## ALPHA LIPOIC ACID

New research suggests that alpha lipoic acid could be an important nutrient in the treatment of Alzheimer's. Eight men and one woman, average age 67, who were diagnosed with Alzheimer's disease, were given 600 mg of alpha lipoic acid daily for almost a year. Each was evaluated using the Alzheimer's Disease Assessment Scale (ADAScog) and the Mini-Mental State Examination (MMSE). During the study their condition stabilized and they did not experience the additional loss of cognitive function that was expected.

I don't know of any drug therapy that can totally halt the progressive loss of mental function in Alzheimer's the way alpha lipoic acid did in this study. (*Arch Gerontol Geriatr* 01:32:275-282) It has no side effects, and is widely available in health food or grocery stores or you can order it from the Vitamin Shoppe at 800-223-1216 or [www.vitaminshoppe.com](http://www.vitaminshoppe.com).



## Help Grow New Brain Cells

You might have learned or heard that everyone is born with a set amount of brain cells and when those cells die, they are never replaced. New research is challenging that theory. Many scientists have been focusing their research efforts on the growth of new brain cells in the hippocampus, the area of the brain associated with learning and memory. They have found several factors that promote new brain cell growth:

- Estrogen is believed to increase neurogenesis (new nerve cell formation). Since estrogen can increase the risk of certain types of cancer, I certainly wouldn't recommend taking it for that reason. However, the phytoestrogens in soy make soy products a safe alternative. Phytoestrogens are plant compounds that mimic estrogen in the body but don't cause the adverse effects triggered by excess estrogen.
- Exercising, socializing, and stimulating, interesting surroundings can double the number of new nerve cells formed.
- Research shows that the neurotransmitter serotonin increases the number of brain cells formed. There are two ways to increase serotonin levels. One is with SSRI drugs (selective serotonin reuptake inhibitors); the other is L-tryptophan. I don't recommend SSRIs because I have too many concerns about their side effects. Which leads me to tryptophan. L-tryptophan is the only natural product I know that will increase serotonin levels.

### The L-tryptophan Story

Tryptophan is considered an essential amino acid. That means it's necessary for your health. Tryptophan has numerous roles in the body, but the most notable is facilitating the transmission of nerve impulses in the

brain and nervous system, through the formation of neurotransmitters.

Until the fall of 1989, L-tryptophan was considered to be one of the safest and most powerful natural medicines for treating a long list of psychiatric conditions. Then reports surfaced that some individuals taking L-tryptophan were developing a condition called eosinophilia-myalgia syndrome. The problem was traced to a batch of contaminated products produced by the Japanese manufacturer Showa Denko.

The FDA didn't just remove the contaminated batches of the amino acid, however. They recalled all L-tryptophan sold for human consumption, destroyed it, and banned all future sales, indefinitely. Today, although the product is back to being legally available, the FDA would still have you believe that L-tryptophan is too dangerous to use, even though we need it to stay healthy.

### How You Can Get Tryptophan

You can get L-tryptophan in your diet, but it's hard to get the amounts your system needs. Foods with higher L-tryptophan content include wheat germ, oat flakes, eggs, cottage cheese, avocados, pork, salted anchovies, Swiss and Parmesan cheeses, and almonds.

Fortunately, you can buy pharmaceutical grade L-tryptophan from the Vitamin Lady, at 800-213-4906 or [www.vitaminlady.com](http://www.vitaminlady.com), or from NuBrain at 770-339-9971 or [nubrain.zoovy.com](http://nubrain.zoovy.com) (note there's no www at the beginning).

Suggested dosages for L-tryptophan vary. In adults, it takes at least 1–2 g to change blood levels. Take B6 (50–100 mg) and niacinamide (100–200 mg) with L-tryptophan to enhance its effects.

## IMPORTANT LESSONS FROM HORSES' MOUTHS

Although I was raised around horses in the Texas panhandle, I've never seen any place where horses are more of an obsession than Australia. Horse racing is its third-largest industry. Everyone—from children to grandparents—seems to live and

breathe the sport. County fairs and city celebrations revolve around race days, and school and public holidays are scheduled to coincide with races.

As in all sports, each participant is looking for an edge over the competition, which has provided me with the opportunity to study the beneficial effects of various herbs, minerals, and nutrients



on well-trained equines. This has been valuable because much of what I discover can be applied to improving human health. Here's a good example.

A horse suffering from chronic drainage of an old injury that just wouldn't heal seemed nervous and timid. I believed it had all the symptoms commonly associated with silicon deficiency. Horses are often fed a diet containing oats, which are rich in silicon, so silicon deficiencies in horses are rare, and it is easy to overlook them. I recommended supplementing the horse's diet with silicon. Almost miraculously, the animal began to improve over the next few weeks.

Newer research suggests that this mineral deficiency might exist in significant portions of the human population, and that silicon may be a very important factor in the prevention and treatment of Alzheimer's.

### SILICON DETERS ALUMINUM

Researchers have long speculated that Alzheimer's disease is linked to accumulations of aluminum in the brain, and links between aluminum in drinking water supplies and Alzheimer's have now been established. A factor that is overlooked is that silicon reduces the accumulation of aluminum. (*Alzheimer Dis Assoc Disord* 98;12(2):83-7) (*J Inorg Biochem* 98;69(3):171-6) (*Lancet* 93;342:211-212) (*Chem Toxic* 93;31(9)679-685)

When researchers added silicon to aluminum-laced water supplies, it prevented the aluminum from being absorbed. It also caused an increase in the excretion of aluminum in urine and lowered aluminum concentrations in the brain, liver, bone, spleen, and kidneys.

### HOW TO REPLENISH YOUR SILICON LEVELS

Silicon is one of the most abundant minerals on the planet, but there are very few foods that contain enough to supply the amounts your body needs. Ground cornmeal, oats, oat straw tea, and horsetail or shavegrass tea are some of the best sources. And while you probably won't find it listed anywhere, beer is a good source. Except for possibly beer (and maybe the cornbread we

Southerners eat), the other items aren't very popular, so it's easy to see why we might not be getting adequate amounts of silicon in our diet.

- One of my first recommendations is to eat oats or oatmeal. Oats are extremely nutritious and a quick way to replenish silicon, as well as other trace minerals. Oats have been shown to be beneficial in lowering cholesterol, healing ulcers, calming gallbladders, relaxing the nervous system, improving skin and circulation problems, and restoring thyroid, pancreas, and reproductive gland function.
- Horsetail or shavegrass tea can help replenish silicon levels. This tea can be found in health food stores. Drink one to two cups per day.
- Check your multi-vitamin/mineral complex to see if it contains silicon. If it does, it will usually be listed as powder from horsetail. A good maintenance dosage is 25 mg per day. If your daily nutrient doesn't contain silicon, take a silicon supplement.

Jarrow Formulas makes an excellent silicon supplement called BioSil. It is a stabilized form of orthosilicic acid which quickly raises serum silicon levels. The recommended dosage is six drops a day (three drops in the morning and three in the evening). This acid form of silicon is easily assimilated, but it tastes pretty nasty. Most people put the drops in either fruit or vegetable juice. Jarrow Formulas can be found in many health food stores. You can also contact them at 800-726-0886 or [www.jarrow.com](http://www.jarrow.com).

- Another way to replenish silicon is with the homeopathic cell salt called Silicea, which comes in tiny pill form, which quickly melts in your mouth. I would suggest taking six tablets three times a day, for a total of 18 a day. (You can't overdose on these cell salts, and they are very inexpensive. Standard Homeopathic markets them in bottles that contain 1,000 tablets for around \$10. Look for them in health food stores.)



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## A VITAL DIETARY COMPONENT WE JUST DON'T GET ENOUGH OF

For years, I've written in *Alternatives* about the numerous benefits derived from taking lecithin. I consider it one of the core items of my personal health program, and I take a tablespoon of lecithin granules every day.

**Lecithin is actually a combination of compounds called phospholipids.** Roughly 23 percent of lecithin consists of the phospholipid group called the phosphatidyl-cholines (PCs), with choline making up about 13 percent of the total PC weight. I mention this mainly because the PCs and choline are generally considered to be the "active" portion of lecithin, and most of the research material focuses on these substances. For practical purposes, though, we're really talking about lecithin.

Since we can get lecithin in food, most traditional nutritionists have never given much attention to the need for supplemental lecithin in our diet. Lecithin, however, is mainly found in the high-cholesterol, high-fat foods. Some of the richest common food sources of lecithin are fatty beef steak, beef liver, and eggs—items that have become unpopular over the last 20 years. With the decreased consumption, it stands to reason that many of us would be consuming less lecithin and choline. As I've discussed in the past, it's often the small changes in our diet that can translate into big health problems further down the road. I have no doubt that this is true when it comes to lecithin.

### STRONG MEDICINE FOR SYNAPSES AND MEMORY LAPSES

I'll try not to get too technical here, but you might have learned in biology class that your nerves communicate with each other through junctions called synapses. The nerves meet at these synapses, where a chemical compound called **acetylcholine** is often used to transmit nerve impulses. (Acetylcholine is called a neurotransmitter.) These synapses are especially numerous in the brain.

To make acetylcholine, nerve cells require **choline**. While nerve cells can actually synthesize

choline from other compounds, or break their own cell membranes down into choline, their best source is getting it directly from the bloodstream. Studies have consistently shown that by taking lecithin orally, you can increase blood plasma levels of choline—which also causes acetylcholine levels in the brain to increase. (*Science* 83;221(4611):614–20) (*Gastroenterology* 92;102:1363–70)

When it comes to using lecithin to help improve nerve transmissions in the brain, most of the studies have involved patients with Alzheimer's and Parkinson's disease. Truthfully, the results have been somewhat mixed. If there was any improvement at all, it appeared to be in slowing the progression or onset of the diseases rather than in treating them. **When it comes to improving memory lapses, however, it appears that regular use of lecithin can be beneficial.**

**When a group of older individuals took two tablespoons of lecithin daily for five weeks, they exhibited fewer memory lapses and improved memory skills.** (*Res Social Work Practice* 94;4:349–58)

In another study involving college students, high doses of lecithin (the equivalent of about 10 tablespoons daily) significantly **improved short-term memory skills within 90 minutes of consumption.** (*Clin Neuropharm* 93;16(6):540–9)

With the inability to patent lecithin, its widespread availability, and its low cost, there's really not much financial incentive for anyone to perform large, long-term studies. The big players (such as pharmaceutical companies and government-sponsored researchers) will probably never spend enough time or energy on lecithin to learn just how beneficial it can be.

### MAKE SURE YOU'RE GETTING LECITHIN

For daily maintenance purposes, I would recommend one tablespoon of lecithin granules (about 2 grams) a day. A dose for promoting heart and liver health will normally require 10–40 grams (5–20 tablespoons) per day, spread throughout the day. Lecithin is non-toxic. Symptoms experienced



at very high dosages are gas, bloating, nausea, or diarrhea.

I recommend keeping the granules in the refrigerator to avoid any problems with rancidity. Fresh lecithin should have a clean, nutty smell and taste. I know some people who just swallow the granules. Although I like the nutty taste, they stick to my mouth and teeth, and I find them hard to swallow. I put them in the blender with my protein shake each morning.

It's important to keep in mind that the fat-like components in lecithin are much like vitamin E and other fat-soluble vitamins. In many instances, it can take months for the body to build up a reserve of these compounds and realize their full effects. In other words, if you want to experience the full benefits of lecithin, you will need to take it consistently on a full-time basis.

Granules are available from health stores or by mail from Bronson Laboratories (800-294-5507 or [www.bronsonvitamins.com](http://www.bronsonvitamins.com)). Lecithin can also be purchased as a liquid, but it's far more expensive.

## AN ANCIENT FORMULA FOR BOOSTING MEMORY

**Padma** was derived from an ancient Tibetan formula known as *Gabur*, or the "camphor formula." Over the last couple of decades, research from both Europe and Israel continues to suggest that Padma is extremely helpful in increasing longevity and improving health. Its primary action is the improvement of circulation, which has numerous benefits throughout the body—including increasing pain-free walking distance in those with poor circulation in the extremities, relieving angina pain, and improving mental function. It's this last benefit that I want to focus on.

### BOOSTING THE BLOOD SUPPLY TO THE BRAIN

For some reason, most people fail to associate gradual memory loss, intellectual deficiencies, attention disorders, and emotional instability with a lack of blood flow to the brain. The connection only becomes obvious following a stroke.

Despite the impression you might get from most doctors, atherosclerosis is a systemic problem. If you're experiencing circulation problems, regardless of whether the symptoms are in your legs or heart, rest assured that the small arteries supplying the brain are also starting to clog and impede blood flow. Since the changes often aren't associated with any pain or noticeable sensation, it might be easy to attribute memory loss or some of the other problems I mentioned to just getting older. In reality you can help prevent and/or reverse these problems by improving your circulation. This can be accomplished with Padma.

In a Polish study at the Neurology Department of Regional Hospital in Zyrardow, Poland, 35 people with known cerebral atherosclerosis were treated with Padma. The individuals ranged in age from 33 to 72 years, and suffered from one or more of the problems mentioned above. Nine had evidence of blockage in the carotid artery that feeds the brain, and 14 had experienced one or more transient ischemic attacks (TIAs) or silent strokes in the last two years.

They were all given Padma for a total of three months at a dosage of 6 tablets a day for the first six weeks, and thereafter 4 tablets a day. Practically all showed remarkable improvements. **Twenty-five reported immediate improvement in memory and the alleviation of emotional instability.** In five of the nine patients with suspected blockages of the carotid artery, associated symptoms regressed almost completely, and in two other patients symptoms were greatly improved. None of those with a history of TIAs experienced any more such incidents.

When this study was presented at a symposium in Poland, one of the neurologists commented that he knew of no substance other than Padma that can make the cerebral circulation so elastic.

### PADMA BASIC

Padma, Inc., of Switzerland has been making the formula under the name Padma 28 for the last 30 years. It is called "28" because it was based on the 28th formula in an ancient textbook of Tibetan medicine. Just recently, the product Padma Basic



from Padma, Inc., has become available in the U.S. It is the same product, except for very small amounts of one ingredient, aconite, which Padma 28 contains. There have been some questions as to the safety of aconite, so it isn't allowed in the U.S. product. Tests have shown that removing the aconite doesn't appreciably change the beneficial effects of the product.

Padma Basic contains the following herbs:

- Allspice (*Pimenta dioica*)
- Bengal Quince (*Aegle marmelos*)
- Calendula (*Calendula officinalis*)
- Cardamom (*Elettaria cardamomum*)
- Clove (*Syzygium aromaticum*)
- Columbine (*Aquilegia vulgaris*)
- Costus (*Saussurea lappa*)
- English Plantain (*Plantago spp.*)
- Gingerlily (*Hedychium spicatum*)
- Golden cinquefoil (*Potentilla aurea*)
- Heartleaved Sida (*Sida cordifolia*)
- Iceland moss (*Cetraria islandica*)
- Knotgrass (*Polygonum aviculare*)
- Lettuce (*Lactuca sativa*)
- Licorice (*Glycyrrhiza glabra*)
- Margosa (*Azadirachta indica*)
- Red Sandalwood (*Pterocarpus sandalinus*)
- Tropical Almond (*Terminalia chebula*)
- Valerian (*Valeriana officinalis*)
- Natural Camphor
- Calcium Sulfate

These herbs are sourced from around the world and rigorously tested throughout the production process to ensure product effectiveness. We recognize only four tastes: sweet, sour, salty, and bitter. In addition to our four, Tibetan medi-

## "Iron" Out Wrinkles in Short-Term Memory

Researchers in Texas have linked deficiencies of iron to short-term memory loss. Studies at the University of Texas Medical Branch have shown that iron-deficient women can dramatically improve their short-term memory of verbal information by taking 30 mg of iron daily, and that supplementing the diet of zinc-deficient women with 30 mg of zinc could improve their ability to associate word pairs.

Many authorities now believe that iron deficiencies are the most prevalent worldwide nutritional deficiency. Estimates are that almost ten percent of women of reproductive age in this country are deficient. Men and children are not immune to the problem, but constant dieting and blood loss during the menstrual cycle place an added burden on females.

If you notice that your spouse (male or female) doesn't seem to remember all the ideas you try to share, maybe he or she has an iron deficiency. (After all, we both know there's no way it could be from lack of interest!)

cine includes astringent and hot. The herbs are tested for identity, purity, and potency by chemical fingerprinting using high-pressure liquid chromatography (HPLC), gas chromatography (GC), and thin layer chromatography (TLC). Test batches of each herb are also sampled by trained tasters to check for astringency.

Padma is packaged to have a five-year shelf life and is free of pesticides and contaminants. Research has repeatedly shown that it has no side effects or interactions with other medications. (It is still recommended, however, that it be taken 30 minutes before meals, and that other medications be taken at another time.)

Dosages vary depending on age and condition. For adults, 6 tablets a day (2 tablets taken three times a day before meals) are recommended during the treatment phase of a problem. Once the problem has been resolved over a matter of weeks or months, you can generally taper back



## Ginkgo: Time-Tested and Proven

You may have already heard of the herb ginkgo for improving memory, but it bears mentioning again. Much like Padma, ginkgo is very effective at improving memory by increasing blood flow to the brain.

A double-blind study out of Austria tested the effects of ginkgo extract on memory and brain function in 48 patients aged 51 to 79 years. Half of the patients took 40 mg of the herb three times daily and the others took a placebo. **After 57 days, patients taking the ginkgo showed improved memory skills.** (*Pharmacopsychiatry* 95;2894:134–42)

In Germany, where ginkgo is classified as a prescription item, doctors routinely recommend the herb over all other medications for dementia. They have found that it's safer and less costly, and achieves results equal to any drug therapy. (*Pharmacopsychiatry* 96;29(4):150–5)

It has long been believed that once a patient begins to experience memory loss, it is generally a permanent and degenerative situation. New research indicates that ginkgo can still improve memory problems if the patient's condition hasn't deteriorated too far.

Several years ago, researchers reported on a year-long study involving 327 patients suffering from either Alzheimer's disease or multiinfarct dementia. Part of the group was given 120 mg a day of ginkgo, and the others were given a placebo. Evaluations were made

at 12, 26, and 52 weeks. **At the end of 52 weeks, 27 percent of those patients on ginkgo showed a four-point improvement in cognitive performance, which is roughly equivalent to a six-month delay in the progression of Alzheimer's disease.** (*JAMA* 97:278:1327–32)

You may have heard of the *JAMA* study reporting that ginkgo doesn't help with memory. That's certainly what the results showed. The researchers gave either ginkgo or a placebo to 203 healthy participants for six weeks, then compared performance on tests of memory and thinking with pre-test performance. There was no significant difference between the groups. The question is, what were they looking for? Ginkgo has never been recommended for creating a "supermemory," which is what you'd get if it improved the memory of people without memory problems. Instead, ginkgo is useful for restoring memory in people who have noticed problems. If you're taking ginkgo, or considering it, don't let this study change your mind. (*JAMA* 2002;288:835–840)

Ginkgo capsules are readily available, and certainly worth a try in Alzheimer's patients. **Make sure whatever ginkgo you choose has been standardized to contain 24 percent of the flavonoid glycosides.** A good daily dosage is 120 mg. Enzymatic Therapy has a standardized product, you can contact them at 800-783-2286 or [www.enzy.com](http://www.enzy.com) to find a store in your area or to order it through the mail.

to a maintenance dose of 1 or 2 tablets a day. For children over three years, try 1 tablet three times a day. Those under three should be given ½ tablet three times a day.

U.S. subscribers can see a health care professional for Padma Basic, or purchase it from EcoNugenics at 800-308-5518 or [www.econugenics.com](http://www.econugenics.com).

### YOUR ADRENAL GLANDS: KEY MEMORY MINDERS

I've always tried to stress the importance of making sure your adrenal glands are functioning properly. These tiny endocrine glands sit on top

of the kidneys and produce a wide variety of hormones that control dozens of body functions. New research suggests that **epinephrine, one of the hormones produced by the adrenal glands, may be one of the most potent memory enhancers in the body.**

Epinephrine is more commonly referred to as adrenaline. When epinephrine is released into the bloodstream, several things occur. It causes blood vessels to constrict and makes the heart pump faster and harder. It increases the metabolic rate by as much as 100 percent above normal. Epinephrine causes fat cells to release additional fatty acids



that can quickly be converted to energy. (Free fatty acids in the blood can increase 10- to 15-fold!) It also triggers the immediate release of glucose (blood sugar) from both the liver and the muscles. Research now shows it is epinephrine's ability to influence blood glucose levels that makes it such an important memory enhancer.

### THE LINK BETWEEN EPINEPHRINE AND MEMORY

After conducting studies on both animals and humans, Dr. Paul Gold from the University of Virginia has concluded that the formation of memory for a particular experience is related to the amount of epinephrine released at the time.

It's well known that as we get older our adrenal glands generally release less epinephrine and begin to experience memory shortfalls. Dr. Gold has shown, in both animals and humans, that these age-related memory problems are often corrected or greatly improved with the administration of epinephrine. When older animals were given the epinephrine their adrenals were no longer producing, their memory was restored to the same level as that associated with young animals.

After the positive results obtained in animals, Dr. Gold began to work with a group of patients suffering from either Alzheimer's or memory problems brought on by brain damage. However, rather than use epinephrine (which would increase blood glucose levels) he simply had the patients drink a glass of lemonade, containing either 25 grams of glucose or a placebo (saccharin), immediately prior to a learning experience. He found that the glucose definitely enhanced the patients' memories of the experience, and the benefits were long-lasting. When tested after ingesting glucose, the Alzheimer's patients had actually doubled their memory scores.

Some very important information can be learned from this study. It gives us some viable methods of enhancing, improving, or regaining our memory skills. (Consuming drinks spiked with glucose is not one of them, however! This would simply be treating a symptom instead of the cause of the problem. When you treat a symptom,

without addressing the root of the problem, you only end up creating additional problems down the road.)

### HERE'S WHAT ELSE YOU CAN DO TO BOOST YOUR MEMORY

First, as I've already discussed, you must have adequate circulation to the brain. All the epinephrine and glucose in the world won't do much good if it can't reach your brain. In addition to Padma and/or ginkgo, **one of the quickest ways to improve circulation everywhere in the body is exercise.** A consistent walking program can make a world of difference.

Next, in addition to improving circulation, **you may need to support the adrenal glands nutritionally.** This is especially true if you already exhibit any of the classical characteristics of weakened adrenals, including lightheadedness upon standing, moodiness or headaches when a meal is skipped, depression, and fatigue. One of the quickest methods to strengthen the adrenals is to supplement the diet with a good adrenal glandular. The best I've ever used is called Drenamin, made by Standard Process Laboratories. It is normally only sold to doctors. However, if you're not a doctor, you can still order it from Rite Care Pharmacy at 818-907-5400.

The normally recommended dosage for Drenamin is to chew one tablet, three times daily. I've found better results from breaking the tablets in half and chewing half a tablet, six times a day on an empty stomach. Often, improvement will be seen in the first day or two; and as long as a proper diet is followed, the problem will be resolved within a month.

Last, but certainly not least, **stress, sugar, alcohol, and tobacco all place an unnecessary burden on the adrenals.** (Five or ten years from now we'll probably read that an excess of these items has been linked to age-related memory loss!)

### SUGAR IS SLOW SUICIDE

Research has recently revealed that the consumption of fructose, sucrose, and all the other forms of sugar could turn out to be one of the big-



gest “hidden” threats to our overall health. When the early pioneers sounded the warning against sugar, it seems they knew exactly what they were talking about.

### **GLYCATION SPEEDS UP AGE-RELATED DISEASES**

One of the major problems stemming from sugar consumption has to do with a chemical process called glycation (or the Maillard reaction). During the next five or 10 years, I suspect you will begin to see more emphasis being placed on the harmful health effects of glycation. But if you’re concerned about preventing health problems such as Alzheimer’s, as well as heart and artery disease, cataract formation, vision loss, and aging in general, glycation is something that you should know about now, not 10 years from now.

In simplest terms, glycation refers to the combination of a sugar and a protein molecule. Most everyone has seen the effects of glycation in the kitchen. During baking, sugar (whether it be white table sugar [sucrose], fruit sugar [fructose] or milk sugar [lactose]) combines with certain amino acids in the grain proteins of flour. The chemical reaction that takes place causes loaves of bread and pastries to turn brown. The same reaction also occurs when meats are glazed and coffee is roasted.

Glycation also occurs in the body when the sugar in your blood (glucose) combines with the amino acids tryptophan, lysine, and arginine. During this reactive process, certain byproducts are created and released within the body. The byproducts are known scientifically as advanced glycation endproducts. And in terms of what advanced glycation endproducts do inside the body, well, their acronym says it all: AGE.

### **TO UNDERSTAND HOW AGES WORK, IMAGINE COOKING AN EGG...**

AGEs are now thought to accumulate in your body and remain there throughout your entire lifetime. The formation of these endproducts is accelerated when you have lower levels of antioxidants in your system and when your kidneys are weak or malfunctioning. More importantly, extremely large numbers of AGEs are also created when

blood sugar levels are high. This helps explain why diabetics always seem to have abnormally high levels of AGEs.

To help get a better picture in your mind about AGEs, visualize the clear, runny portion of a raw egg. This part of the egg is mostly protein. An amazing chemical reaction takes place when you heat this clear portion of the egg. It quickly and permanently transforms from a runny, clear liquid to a solid, rubbery white mass.

### **NOW IMAGINE THE SAME HARDENING PROCESS IN YOUR HEART, EYES, AND BRAIN**

Proteins similar to those in the egg are found throughout your body. Proteins, after all, are the body’s building blocks. They are used in the construction of enzymes, blood vessels, muscles, nerve fibers, organ tissue, and just about every other body part. When glycation occurs and AGEs form, these proteins are changed forever. Just like the changes to the egg, the process is irreversible. The long-term health consequences of this protein-altering process can be disastrous.

For example, when proteins in blood vessels undergo glycation, you get stiffer, less flexible arteries which lead to higher blood pressure, plaque formation, blood flow blockages, heart and artery disease, stroke, heart attack, etc. The smallest blood vessels are the hardest hit, such as those in the back of the eye, the kidney, and the brain. These areas require a constant supply of glucose to meet their high energy requirements. As a result, they have the highest degree of glycation of any tissue in the body. Animal studies have confirmed that damage occurs to areas like the eyes when diets high in sugar are consumed. In particular, we now know that the cloudiness that begins to develop in the lens of the eye (more commonly known as cataracts) is a result of glycation. The increasing incidence of cataracts in this country is no doubt linked to our ever-increasing sugar consumption.

Researchers also now believe that glycation lies at the heart of the alteration of proteins in the brain that causes Alzheimer’s disease. (*Metabolism* 80;29:1247–1252) (*J Nutr* 98;128:1442–1449)



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What all this boils down to is that refined sugars speed up the aging process and accelerate the formation of what we commonly call “age-related” diseases. If you are diabetic, you’re well aware of the importance of monitoring sugar intake. For those of you who are not diabetic, here are some steps you can take to help keep your own blood sugar levels in the healthy range.

### HOW TO GUARD AGAINST GLYCATION AND THE “AGE”ING PROCESS

1. The most obvious step is to cut back on your intake of refined sugar. I’m not just talking about the white granules we all keep out on the counter. Sugars of all types are being added to just about every processed food imaginable, even unsweet things like ravioli and soup! Because these sugars undergo glycation during processing, they’re every bit as harmful as table sugar—and likely even more so!

In general, the easiest way to cut back on refined sugars is to read food labels and make sure sugar (sucrose, dextrose, fructose, maltose, lactose, etc.) is not one of the first four or five ingredients on the label. The most popular sugar among manufacturers these days is high-fructose corn syrup—which, unfortunately, also appears to be the most active in triggering the glycation process and the formation of AGEs. Steer clear of that ingredient as much as possible.

Also, if you do choose to buy processed foods, opt for those that have at least a few grams of fiber. This will help slow the release of sugar into the bloodstream.

2. Use stevia to sweeten beverages and baked goods. I’ve written at length about this natural substance in *Alternatives*. Unlike sugar, stevia doesn’t trigger glycation or spikes in blood sugar. In fact, it’s now used in South America to help stabilize blood sugar in diabetics. And unlike artificial sweeteners, stevia has no after-taste, side effects, or connection to cancer.

By now, stevia should be readily available in health food stores, although you likely won’t find it alongside sugar or other sweeteners. The Food & Drug Administration has approved the importation and sale of stevia as a “dietary supplement,” but not as a sweetener. All this means is that you’ll need to look in the supplement aisle. You should find it in both powder and liquid-extract forms. Most people find the liquid extract closer to sugar in taste and easier to use. (One in particular that I’ve used is made by Body Ecology and four drops of the liquid equals one teaspoon of sugar.)

If you have trouble finding stevia in your area, you can contact Body Ecology at 800-511-2660 or [www.bodyecologydiet.com](http://www.bodyecologydiet.com), or The Heritage Store at 800-862-2923 or [www.caycecures.com](http://www.caycecures.com).

3. I would also recommend that you eat more fresh fruits and vegetables. As I mentioned earlier, eating unprocessed fruits high in fructose doesn’t appear to cause the problems associated with glycation and AGEs. As is usually the case in nature, fruits have built-in co-factors such as fiber, antioxidants, and minerals that help prevent such problems. So go for the pineapple, not the pineapple upside-down cake.
4. You can slow the aging process and dramatically improve your health by maintaining high antioxidant levels. Eating more produce as I recommended above is an excellent start, and you should also use a high-quality daily supplement to ensure adequate and consistent levels of these nutrients.

In a recent Johns Hopkins University study, out of 4,740 people over the age of 65, those who supplemented their diets with vitamins C and E had a 64% lower risk of developing Alzheimer’s. The recommended dosages, based on the study, are 500–1,500 mg of vitamin C and 400–1,000 IU of vitamin E. Vitamin B6 and alpha-lipoic acid have also been shown to be particularly beneficial in combating the effects of glycation.



## Vitamin E Safety: Why You Shouldn't Worry

You probably read it in the papers or saw it on the nightly news. A recent "meta-analysis study" (sounds impressive when they say it that way, doesn't it?) has indicated that patients taking high doses of vitamin E may have an increased mortality risk. I don't buy it.

First of all, a "meta-analysis study" just means they looked over some former vitamin E studies—they didn't do a new study. In this case, they chose to look at 19 former studies in which they saw a *statistically insignificant* increase in mortality risk. They didn't look at the over 6,000 studies that have shown the cardiovascular benefits of vitamin E supplements.

Basically, they found that the average death rate in the control groups was 1,022 deaths for every 10,000 patients, but that the average death rate among those taking high doses of vitamin E was 1,061 for every 10,000 patients (an increase of 39 out of 10,000). What the news media hasn't reported is that the rate was 1,006 deaths for every 10,000 patients taking lower doses of vitamin E (a decrease of 16 out of 10,000).

Both the increase and the decrease in this analysis are *statistically insignificant*. At the very worst, they might indicate that vitamin E has no effect one way or the other. But I don't buy that either.

I still believe that vitamin E supplementation is needed to maintain good heart and eye health. In fact, there are three things about the study that I'd like to comment on.

First, I'd rather put my support behind the over 6,000 studies that show a cardiovascular benefit over the 19 studies that show that there *might* be a slight risk. Second, the study looked at the effect of large doses of vitamin E as a treatment on diseased patients, not as a preventive measure on healthy individuals. Finally, and what I think might be very important, the study doesn't indicate whether the patients were taking synthetic vitamin E or natural vitamin E.

I have always maintained that not all vitamin E is created equal—and the type you take can make all the difference in the benefits you receive. Natural vitamin E comes from food sources, but synthetic vitamin E is derived from petrochemicals—and I've never recommended putting petrochemicals in your body. (Natural vitamin E is called d-alpha tocopherol, while the synthetic version is dl-alpha tocopherol.)

I still recommend taking a comprehensive daily multi-nutrient with 300 to 600 IU of natural vitamin E each day.

\* \* \*

A little bit of willpower now can help you slow the aging process and significantly lower your risk of developing Alzheimer's, diabetes, cataracts,

heart and kidney disease, and dozens of other so-called "age-related" problems.





# Alternatives<sup>®</sup>

FOR THE HEALTH-CONSCIOUS INDIVIDUAL

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Dr. David G. Williams  
circa 1985

## Performing Under Pressure

Last month I discussed the importance of improving lymphatic flow throughout your body, and the many positive implications that it can have on your health. The recognized benefits you can experience can be truly amazing. As I explained,

studies are beginning to demonstrate how proper lymph flow is essential if your body is to remain disease-free. Additionally, obstructed or poor lymphatic drainage has been linked to two of the most common forms of cancer (breast and prostate), and plays a pivotal role in the metastasis of various forms of cancer throughout the body.

It is my hope that you have already started to implement many of those ideas and techniques that I covered last month. They will go a long way in improving practically any health problem you might experience. In this issue, I'll show you how to further facilitate lymphatic drainage through very specific massage techniques.

### Maximum Lymphatic Drainage

Lymphatic massage differs drastically from other forms of massage, and following a few simple "rules" will let you achieve maximum lymphatic drainage.

When most people refer to lymphatic massage they use the term "manual lymphatic drainage" (MLD), which was coined by Dr. Emil Vodder and his wife, Estrid, when they first presented their research to a 1936 medical symposium held in Paris. The Vodders had achieved very profound effects using very specific low-pressure movements.

As I mentioned last month, approximately 70 percent of the initial lymph vessels are located in,

or just below, the skin. These small, initial vessels drain into larger vessels called pre-collectors, then into even larger lymph vessels called collectors—all of which eventually drain into the thoracic duct (which traverses your chest cavity).

The lymph moves through the vessels partly due to a "vacuum" effect created by breathing (which I explained in detail last month), muscle contraction, and from a light stretching of the skin. The Vodders discovered how to utilize a very light stretching movement of the skin to dramatically increase lymph flow. This very gentle pressure is just one of the factors that distinguishes MLD from other forms of massage therapy. Understanding these various differences will help you achieve some amazing results on both yourself and others.

### Not Your Ordinary Massage

The most difficult point to grasp for most people seems to be that of using light pressure. Generally, the pressure should be deep enough that you don't just slide over the skin, but light enough that you

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*You will observe with concern how long a useful truth may be known, and exist, before it is generally received and practiced on.—Benjamin Franklin*



don't feel muscles, tendons, et cetera underneath the skin—about one to four ounces of pressure. You can readily check how much pressure this is by pressing on a kitchen scale or other small scale.

During massage, the skin should not redden nor should the pressure ever elicit any pain. Most people (including professional therapists) can't believe that such a light pressure can provide any benefit. Keep in mind, however, that the lymph vessels you are draining are located, for the most part, within the skin—and it doesn't take much pressure to compress the skin. Excessive pressure will not only collapse the lymph vessels, but can also tear the filaments that hold the small vessels in place. And research has shown that while proper massage can increase lymph flow by as much as 20 times, using too much pressure can collapse the vessels and dramatically impede flow for hours.

(This possibility of damage is one of the primary reasons deep massage techniques are not recommended to relieve edema, or areas of fluid retention. Fortunately, however, broken filaments will generally reform within a 24-hour period, and proper lymph flow resumes on its own. If you're considering a massage for another purpose, such as relaxation or reducing scar tissue, go ahead—the change in lymph flow is only temporary. I wouldn't recommend daily deep massages, though.)

When I was in Cuba years ago, I was given a tour of one of their health spas that they hoped to promote to future tourists. One of their so-called lymph draining therapies required the patient to stand naked against a stone wall while being shot with ice-cold water from a high-pressure fire hose. It was an incredible sight to see, and from the individual's facial expressions and cries, I'm sure it increased circulation. However, I tried to explain to the attending doctors that, except for the increased gasping for air, their "therapy" probably had very little effect on improving lymph flow. It appeared to be something they had adapted from Russian KGB

interrogation techniques rather than something a spa patron would enjoy.

## A Delicate Touch Is All It Takes

When the skin is lightly stretched, lymph vessels in the skin first open and then are stimulated to contract and move lymph fluid along. Rather than a straight stretch, however, Dr. Vodder felt the effect was even more pronounced when a slight circular or spiral component was added to the motion.

Based on his research, one would apply a light pressure to the skin, gently stretching the skin in the proper direction using a circular motion. After making five to seven expanding spirals that move gradually toward the node, relax any pressure you've applied with your fingers—but don't remove your fingers from the surface of your skin. Keeping the fingers in contact with the skin allows the lymphatic valves to close and the lymph to be sucked further down the lymphatic channels. You will develop a rhythm and proper speed to the massage as you gain experience.

A resealable sandwich bag and just a little water can help demonstrate what you should feel while performing the massage. Place several tablespoons of water in the bag and remove all the air. (With the bag lying flat, there should be a thin layer of water that separates both sides of the bag completely.) Put the bag on a soft surface like a bed or chair. While gently massaging the water from one corner of the bag to the other, release the pressure and visualize the water being sucked away. If you're able to feel the surface of the bed or chair through the bag, you're probably applying too much pressure.

## Moving in the Right Direction

From the illustrations on the next page, you can see the direction that the lymph needs to move. It's important that you follow the proper direction since forcing lymph in the wrong direction can damage the small lymph vessel valves. It's always



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best to refer to the drawings since the lymph channels don't flow straight toward the thoracic duct. In draining the different quadrants of the breast, for example, you'll need to massage in different directions.

Where you begin your massaging action is also extremely important. With most massage techniques, the general goal is to increase blood flow to the heart by starting at the furthest points and massaging toward the heart. In lymphatic massage, however, always begin your massage nearest to the node that you're draining to (check the accompanying charts relating to the body part you're working on).

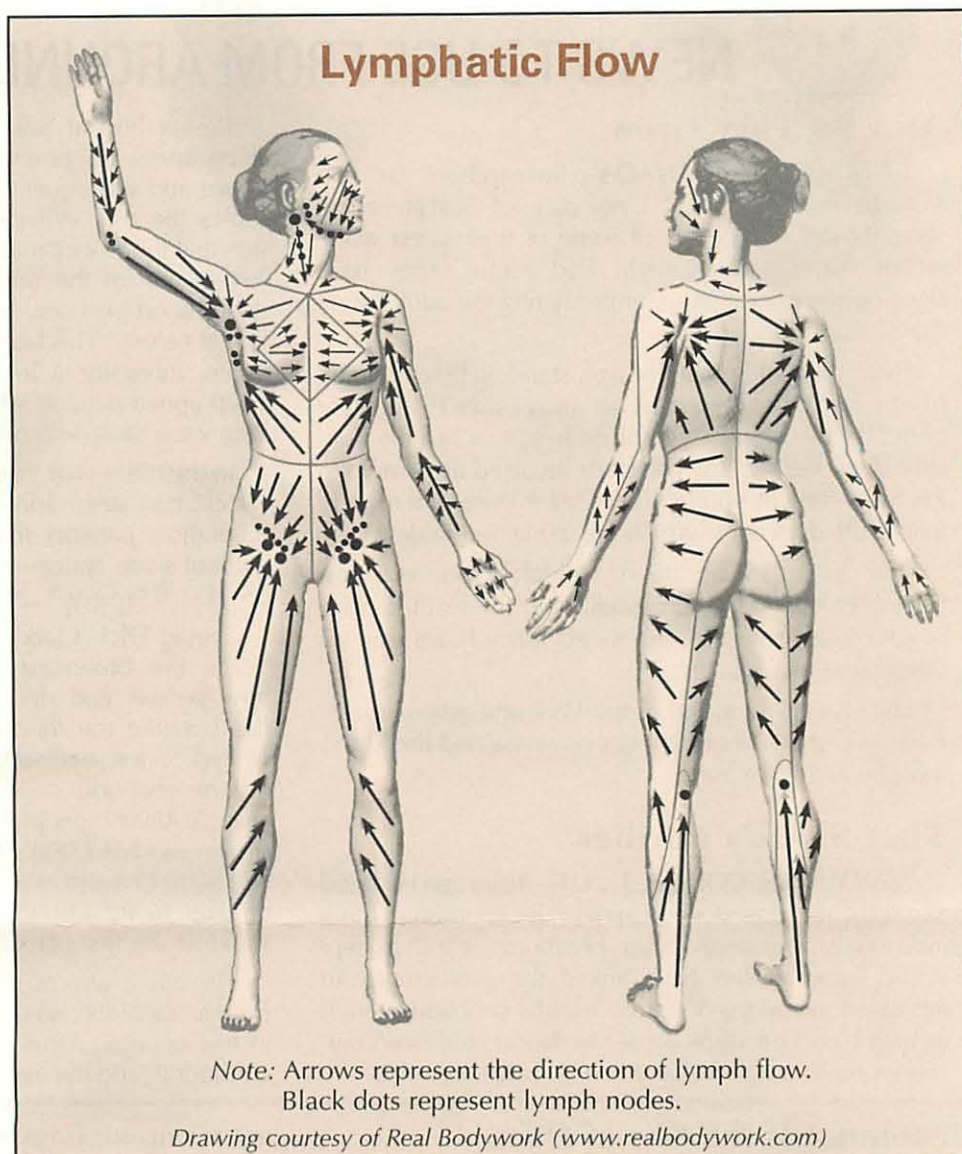
Start about four inches (one hand-width) away from the node and begin to push the lymph toward the node. When you reach the node, slide your fingers lightly back about eight inches (two hand-widths) and massage to your original starting point. Continue the process to the end of the line—always pushing the lymph fluid in the direction of the node.

This procedure clears the lymph in front of the node so more fluid can move to the node. It also creates suction that pulls more fluid down the path.

### Modified Brazilian Drainage Technique

A few years ago, researchers in Brazil took a closer look at the hydrodynamics of lymph flow. They never questioned the effectiveness of manual lymphatic drainage; they were trying to simplify the process. They concluded that using rollers might be just as effective as, if not more so than, circular massage. (*Lymphology* 02;35:91-93)

The rollers they used were similar to stiff hoses or tubing, and they seem to work well on certain parts of the body. For example, a 6-inch-long hose (about 1 to 1-1/4 inch in diameter) can be used to



massage the upper thigh. Again, it is suggested that you start closest to the lymph nodes at the groin and work your way back to the knee—always pushing the lymph toward the nodes—and pause after moving the hose an inch or so. (With the hose, you'll use a gentle rolling motion rather than small circles.)

I've gotten the best results with this technique when I used it on the arms and legs. I've found that a short piece of automotive heater hose (for the leg) or fuel hose (for the arm) works well and can be had for nearly nothing at most auto parts stores.

The tubing comes in especially handy for individuals who must regularly do their own massage to relieve edema in the lower extremities (feet, ankles, calves, et cetera). Manual massage is still best, though, for draining smaller, less uniform areas—such as the breast, shoulder, or face.





## NEWS TO USE FROM AROUND THE WORLD

### And So They Grow

SASKATOON, CANADA—Researchers at the College of Kinesiology, University of Saskatchewan recently sent me details of some of their latest work, which many parents might find useful. They have developed an online tool for predicting the adult height that children will reach.

By simply plugging in the age, standing height, sitting height, and weight, you can get an accurate (95 percent correct) indication of the future height of healthy children aged eight to 16. The steps involved are simple to follow as long as you take accurate measurements and follow the directions, which are explained in detail.

The formula has been validated primarily on Caucasian children at this point, and the team is planning to investigate whether its accuracy holds true for other races as well.

Details can be found at the Web site [athena.usask.ca/growthutility/](http://athena.usask.ca/growthutility/) (note: there's no www and the letters must be all lowercase).

### That Snore's a Killer

NEW HAVEN, CONNECTICUT—Years ago I warned about the dangers of sleep apnea, the condition where individuals repeatedly stop breathing while asleep. While some studies have linked the problem to an increased incidence of cardiovascular problems—such as high blood pressure, atrial fibrillation, and heart failure—a new study reveals it can also cause strokes.

Researchers at Yale School of Medicine found that sleep apnea doubles the risk for the development of stroke and subsequent death. Severe apnea more than triples the risk. What might be even more surprising was that the risk increased without regard to the patient having any of the other usual risk factors for stroke (high blood pressure, high cholesterol, diabetes, smoking, et cetera). This latest study supports a similar study at the University of Toronto last year, which found that sleep apnea patients were more likely to suffer strokes than were those without the problem.

In the three-year Yale study of 1,022 patients, a total of 697 had sleep apnea. Stroke or death occurred in 72 of those patients, in contrast to only 16 in the group without sleep apnea—up to four times the risk. (*NEJM* 05;353:2034–2041)

Seeing Dick Clark's condition on his recent New Year's Eve broadcast was a grim reminder of just how serious and debilitating strokes can be. *Stroke has become the third leading cause of death in the United States, behind heart disease and cancer, and the number-one cause of long-term disability.* This year, 700,000 people in this country will suffer a stroke—and 163,000 will die as a result. It's a problem you want to avoid at all costs. (See "The Test of Time" on page 62 for a tip on how to prevent damage from a stroke in the first place.)

Though it affects one in five adults, sleep apnea unfortunately still isn't recognized as a serious problem in this country. Most people, generally bed partners, consider it (and the associated "industrial strength snor-

### Ignorance Is the Kiss of Death

Lymphatic drainage isn't something normally taught in medical school. In fact, the only time most doctors hear or read about the need for such therapy is in association with lymphatic filariasis that results in elephantiasis—a condition in which microscopic parasitic worms invade the lymphatic system. Since elephantiasis is a tropical disease and, thus, not commonly found in the US, most doctors here don't give it much thought. Unfortunately, as a result, they don't give the idea of improving lymphatic flow much thought either.

Improving lymph flow through the specific massage techniques I've outlined here (or through the other methods I covered last month) can have a dramatic impact on your health—particularly for individuals who have undergone surgeries, severe trauma, infections, or radiation treatments for cancer. Problems will most frequently result in swelling in the hands or feet, depending on where the dam-

age occurred. However, as I explained last month, the immediate effects of poor lymph flow might not always be that noticeable. It could take months or even years before you begin to see the problems.

One good example of the type of incident that would cause a problem is the removal or irradiation of axillary lymph nodes during breast cancer treatment. Following such a procedure, it's not uncommon to experience fluid retention, or edema, in the associated arm. While the swelling might not be that noticeable, these women often experience one or more symptoms—such as "pins and needles," dull aching pain, pressure, or a generalized weakness in the muscles of the shoulder, arm, wrist, or hand. Lymphatic drainage massage can relieve these problems by getting the lymph moving up the arm and around any damaged or missing nodes. (And a heavy purse or backpack thrown across the shoulder impedes lymph flow in even the healthiest of individuals.)



## NEWS TO USE (CONTINUED)

ing") more of a nuisance rather than a sign of impending death or disability. In fact, what still brings most sufferers to the doctor is constant fatigue and a lack of daytime energy.

The problem occurs when the upper airway sags due to excess tissue or loss of muscle tone and blocks the passage of air. It is more common in people who are overweight. As an interesting side note, one study involving over 300 National Football League players found that 14 percent of them experience sleep apnea. That's a rate five times higher than males of the same age in the general population. In linemen, the heaviest NFL players, the rate was even higher at 34 percent. (*Sleep Med* 03;4(4):317-325)

If your bed partner suffers from sleep apnea, urge him or her to address the problem. The treatment may be as simple as weight loss. However, sleep apnea may also be caused by a deviated septum, or enlarged tonsils or adenoids (more common in children). In many cases, the condition can be easily and painlessly treated using a machine that blows air into your nose to keep the airway open as you breathe. It is called a CPAP (continuous positive airway pressure) machine.

We often live with impending health problems that provide little, if any, warning. For instance, we may miss subtle clues of the beginnings of diabetes, high blood pressure, or heart disease—but that's not the case with sleep apnea. It gives one of the loudest and clearest signals that there's a serious, underlying condition that needs to be addressed. You wouldn't even think about ignoring the high-pitched, irritating screech from a

smoke alarm, and you certainly *shouldn't ignore* the ground-shaking snores associated with sleep apnea.

## More Good from Pomegranate

CLEVELAND, OHIO—Not too long ago I reported on research that showed that drinking pomegranate juice can have a very significant effect on reducing the degree of atherosclerotic plaque formation in high-risk cardiovascular patients. In that same article I mentioned other research where the juice might also be a valuable tool in the treatment of diabetes and in the treatment and/or prevention of cancer of the breast and prostate. New research now shows pomegranate juice contains compounds that support joint health by blocking protein molecules that break down cartilage.

Pomegranate extracts were shown to block the protein Interleukin-1b, which creates an over-production of inflammatory molecules that damage joint cartilage. (*J Nutr* 05;135:2096-2102)

I suspect this latest will be just one of many studies that will continue to validate pomegranate fruit, juice, and extracts as powerful tools we can use to protect our health. It's one item I suggest including in your diet sooner rather than later. You can find pomegranate at grocery and health food stores, and even some larger retailers (such as Costco). Whichever one you choose, make sure it's only juice or a concentrate with no added sugars.

You should consider poor lymph circulation as a contributing factor if you have any of these ailments:

- High blood pressure;
- Chronic fatigue;
- Depression;
- Heart disease;
- Arthritis (particularly rheumatoid arthritis);
- Heaviness and/or tension in a limb;
- Aching, bursting pain, or over-all joint stiffness; or
- Skin problems—such as eczema.

Some leading heart specialists even believe that poor lymph flow is now a primary cause of our heart disease epidemic.

Additionally, if you have one particular troublesome joint or limb it may be linked to lymph system damage somewhere along the pathway.

Doctors never bother to tell their patients that the lymph system will be sacrificed during sur-

gery—which is one reason that I'm a proponent of micro-surgery over larger-scale surgical methods. Future generations will look back and scratch their heads as to why we were so careless and destructive in our treatment techniques.

## When Not to Massage

There are a few instances where lymphatic massage is contraindicated—including acute inflammation or infection, malignant tumors, thrombosis, and major heart problems. For instance, in acute inflammation, the tissues will be red, painful, congested, and accompanied by fever. You wouldn't want to push any pathogens or substances further into the lymph system until the body had a chance to deal with them.

There's been a great deal of debate about using lymphatic drainage massage with malignant tumors for fear of causing them to spread. A trend has sprung up recently in support of such therapy



# The Test of Time: *Stroke Recovery*

20<sup>th</sup>  
Anniversary

A team of neurologists at the University of Texas has released a very interesting tidbit on how to protect the brain from stroke damage. At a meeting of the American Neurological Association, Dr. James Grotta broke the surprising news. He reported that a shot of alcohol followed by a cup of coffee might be as effective in limiting stroke damage to the brain as some of the drugs now being used in emergency rooms.

Dr. Grotta and his colleagues tested common substances like alcohol and caffeine on stroke-induced laboratory rats. Alcohol alone made the stroke worse. Caffeine alone didn't seem to do anything. However, when the two were combined, the brain was protected from stroke damage. As strange as it may seem, if you or someone you love suffers from a stroke, a viable emergency treatment might just be an Irish coffee.

I am not a coffee drinker, but in this case, I would make an exception. Just so you'll have it in one place, here are the directions for making Irish coffee in the event it ever becomes necessary. Obviously, the sugar and whipped cream would not be used in an emergency.

## *Traditional Irish Coffee*

- 2 cups strong black coffee
- 1 Tbsp. sugar
- 2 oz. Irish whiskey

Stir well; top with whipped cream.

Alcohol opens up blood vessels, and caffeine is known to increase blood flow. Both exert their

effects quickly, and together they appear to prevent stroke damage very effectively.

This is one technique that you must put to use immediately and correctly if it's going to be of any help. I think it would be a bit naïve at this point to expect that EMS technicians or hospital and emergency room personnel will routinely begin to offer Irish coffee to suspected stroke victims. It's something you and your family will need to remember and be able to do quickly on your own if the need arises.

(Not coincidentally, there's an experimental drug that does the same thing as the Irish coffee. Caffeinol is an intravenous combination of caffeine and alcohol. When administered within two hours of a stroke, it reduces damage to the brain by up to 80 percent. It would likely cost a lot more than an Irish coffee, however.)

Keep in mind that stroke symptoms are not always dramatic and sudden in onset. Subtle signs you should be aware of include dizziness, dim or blurred vision, numbness or tingling in the mouth or cheeks, weakness in the legs and arms, headache in the back of the head, and nausea and vomiting. The quicker you're able to react, the less brain damage will occur, and the quicker the rehabilitation should be. Even if you're wrong and it turns out not to be a stroke, the risks from an occasional Irish coffee are pretty small.

*Tip from Vol. 8, July 2000*

before and following cancer therapy to aid in healing, but I don't recommend it.

Additionally, thrombosis and phlebitis can lead to free-floating blood clots, and you wouldn't want to encourage the movement of such clots in any way. Along the same lines, if you have a major problem with your heart (such as congestive heart failure), increasing the lymph flow could increase its workload—which would be ill-advised.

Ideally, a weekly (or at the very least monthly) lymphatic drainage massage would be of great benefit to most people. (In the initial stages of dealing with chronic problems such as swelling and arthri-

tis, it might be necessary to have lymph massages three times a week.) Research has shown that the pumping action of the major lymph collectors is enhanced for several days to a week after a proper massage. Repeated massages "reset" the nervous system—allowing for better dilation of lymph vessels, which increases their carrying and pumping capacity.

Give yourself (or have someone give you) a good lymphatic massage, and follow the other techniques that I outlined last month to start increasing lymph flow. You'll be amazed at how such superficial work can produce such deep, long-lasting results.



# HEALTH HINTS FROM READERS



## Getting Your Daily Coconut

You asked for suggestions on using coconut oil. I have a delightful way of using it. I take one tablespoon of coconut oil and mix it with one tablespoon of crunchy organic peanut butter. Mix it smooth. It is almost a confection. It is a great treat that I look forward to at lunchtime.

— Dorothea L.,  
Easton, Connecticut

I've been using coconut oil for a couple of years now. Every day I have it in some form or at least munch on some unsweetened coconut, and my cat and dog both sit and beg for their daily ration.

Some of my suggested uses:

- 1) Moisturize lining of nose to prevent nose bleeds during dry artificial heat of winter;
- 2) Apply to scar tissue—it's more healing than vitamin E oil (also healed cracked nose of old dog);
- 3) Apply to chapped lips;
- 4) Oil treatment for hair before shampoo;
- 5) If scrambling eggs, mix with egg, water, et cetera;
- 6) Low temperature frying such as eggs or sautéing;
- 7) Add to veggies instead of butter or sauce;
- 8) Popcorn—both in the pan and in place of butter after it is popped;

- 9) Add to the water you cook pasta in—my favorite; or
- 10) Mix with spices for a rub to put on meat.

— Donna H.,  
Frazier Park, California

*Thanks for all the suggestions. I had pretty much resorted to just eating it from a spoon, but I will now try it as a meat rub. I've tried cooking with it and it always seems a little strong for my taste. It does go well with some cooking styles, though, such as those from Thailand or almost any Pacific area. One source I recommend is Wilderness Family Naturals. Their number is 866-936-6457 and their Web address is [www.WildernessFamilyNaturals.com](http://www.WildernessFamilyNaturals.com).*

## Cataracts Drop Right Away

A reader from my neck of the woods wrote in recently to say that he was developing a cataract in his left eye, and wondered what I would recommend he do. Cataracts are a leading cause of blindness, and can be the result of anything from diabetes to steroid use.

You'd certainly rather prevent cataracts than treat them after the fact. I've written about cataracts numerous times in the past, and how bioflavonoids and antioxidants can help you avoid the problem in the first place. If you already have a cataract, like the reader, there is still hope.

There has been some very promising research out of Russia that I have been following for the last few years in relation to cataract treatment. Dr. Mark Babizhayev and his colleagues at the Helmholtz Eye Institute in Moscow have been studying the effects of the natural compound N-acetylcarnosine (N-AC—not to be confused with N-acetylcysteine, which I have written about often and is used to boost glutathione levels) since about 1991.

During this time, Dr. Babizhayev's work has progressed from extensive laboratory testing in animal models to human studies. (*Life Sci* 05, Dec.29) (*Drugs RD* 05;6(6):345-369) (*Rejuvenation Res* 04;7(3):186-198) (*Drugs RD* 04:5(3):125-136) (*Drugs RD* 02;3(2):87-103)

Dr. Babizhayev has discovered that he has been able to prevent cataract formation by applying a 1-percent liquid solution of N-AC directly to the eye. Even better news is that his eye drops have actually reduced and eliminated age-related cataracts. These results have all been accomplished without surgery or drugs.

Cataracts result from a clouding of the eye's lens, which never stops growing—much like your hair and nails. Lenses grow from the outside in, though, meaning that the cells at the center are the oldest. As the cells age they are subjected to oxidation and a process called glycation, in which sugars combine with proteins. N-AC eye drops have been shown to prevent and reverse the cross-linking of the lens proteins that leads to opacification and impairs vision.



Measurable effects have been seen using the drops after only a month of use, and there have been no side effects. (Some of the patients I've spoken with, however, did occasionally notice a temporary "blurring" in their vision for an hour or two following their use. This effect appears to be from the "melting" or breaking-up of the cataract.)

Dr. Babizhayev's reports suggest that the reversal of the cataract starts at the periphery and works its way inward. During the process, which seems to take about six months, vision becomes clearer. He has shown that over a six-month period of treatment, over 41 percent of the eyes treated with N-AC eye drops exhibited improvement in transmission of light through the lens, 88.9 percent showed significant improvement in glare sensitivity, and 90 percent had a significant improvement in visual acuity. In no instances did eyes treated with the drops worsen in any way. His trials have extended for periods of up to two years with only continuing positive effects being seen.

Dr. Babizhayev recommends applying one to two drops of N-AC solution in each eye twice daily. The maximum effect on visual acuity generally occurs within the first three to five months of therapy. Those who had their cataracts for less than seven years experienced the quickest and best results. Individuals with cataracts for seven to 15 years obtained good results. While those with cataracts for more than 15 years still showed improvements, they had the least response.

## See Your Way to the Drops

I've been following this research for years, but it's only recently that the therapeutic eye drops have become available commercially. Thanks to the Internet, you can now obtain Dr. Babizhayev's formulated product (called Can-C) in the US. There are some competing products that are also being sold in this country. Due to FDA considerations, however, no one marketing these products in the

US will advertise their products as being a treatment for cataracts. Instead, they will be for "eye health," et cetera.

I've spoken with numerous individuals, and the two formulas that I will mention below appear to work equally well. The standard package available for sale (five 2-mL vials) costs around \$40 and will last 35 days if you use two drops per eye per day, or 75 days if you use only one drop per eye. It's definitely a bargain in anyone's book when you compare the other options for getting rid of cataracts—such as surgery.

You can order Dr. Babizhayev's Can-C product from Smart Nutrition, 1765 Garnet #66, San Diego, California 92109. Their Web site is [www.Smart-Nutrition.net](http://www.Smart-Nutrition.net) and their phone number is 858-270-9015.

A similar N-AC eye drop product, which costs a couple of dollars less, is Eye D'Clare. It can be purchased from Life Enhancement by calling 800-543-3873 or on their Web site at [www.Life-Enhancement.com](http://www.Life-Enhancement.com).

The enormous benefits of N-AC eye drops should be the topic of every nightly newscast and front-page headlines on every newspaper—but you and I both know that just won't happen. Cataract surgery and treatment has become too big of a business. With the oldest baby boomers just now beginning to reach the age where cataracts start to form, the condition will become a surgical "cash cow."

Unfortunately, not everyone in the world can afford surgery. Around the world, cataracts account for over 40 percent of all cases of blindness, affecting over 17 million people. Now, for less than \$200, the world is revealed again.

Take care,

*Dr. David Williams*

If you have questions or comments for Dr. Williams, please send them to the mail or e-mail addresses listed to the right. Of course, practical and ethical constraints prevent him from answering personal medical questions by mail or e-mail, but he'll answer as many as he can in the Mailbox section of *Alternatives*. For our part, we'll do our best to direct you to his issues, reports, and products related to the subject of your interest.

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FOR THE HEALTH-CONSCIOUS INDIVIDUAL

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Dr. David G. Williams

## The Never-Ending Struggle

Not long ago, many doctors were telling their patients on prescription medications to curtail consumption of grapefruit and grapefruit juice. I thought the idea was absurd at the time, and I still do. Instead, the focus should be on helping these patients curtail their drug use.

The problem is that eating grapefruit or drinking the juice increases the absorption of certain drugs by as much as 200 percent—particularly blood pressure-lowering medications and the popular (but dangerous) statin drugs used to lower cholesterol levels. Researchers have now discovered that the group of compounds called furanocoumarins is responsible for this increase in absorption.

Surely I'm not the only one who sees the irony in eliminating a nutritious food such as grapefruit—which could help reduce cholesterol oxidation, increase weight loss subsequently lowering blood pressure, and help prevent diabetes—so one can continue to utilize a pharmaceutical band-aid that, in the long term, may well increase one's risk of dying. I realize that eating a grapefruit with every meal won't solve all these health problems, but it can certainly be an integral part of an overall program that will address the underlying causes and not just mask symptoms with drugs.

At the Scripps Clinic in La Jolla, California, researchers recently studied the effects of grapefruit and grapefruit juice on body weight and metabolic syndrome.

(Metabolic syndrome is also called Syndrome X, which is loosely defined as having any three of the following: abdominal obesity, high triglycerides, high blood sugar, high blood pressure, or low HDL cholesterol. It is a precursor to diabetes.)

A total of 91 obese patients received one of the following three times a day before meals: half a grapefruit with a placebo capsule; 8 ounces of grapefruit juice and a

placebo capsule; grapefruit capsules and 7 ounces of apple juice; or placebo capsules and 7 ounces of apple juice.

After 12 weeks the fresh grapefruit group lost a total of 3.52 pounds. The grapefruit juice group lost 3.3 pounds. The grapefruit capsule group lost 2.42 pounds and the placebo group lost 0.35 pounds.

Grapefruit is not only a delicious way to help lose excess weight, it also appears to be a diabetic's (or potential diabetic's) best friend. While the grapefruit users in the above study saw significant weight loss, they experienced an additional benefit: a substantial reduction in blood glucose (blood sugar) and insulin levels. (*J Med Food* 06;9(1):49-54)

## We All Have a Drinking Problem

These days, just about anything you can do to lower your risk of developing diabetes is probably worthwhile. Clearly, a diet high in refined carbohydrates is one of the most common causes of diabetes. For most people this news isn't a surprise. They may not be aware, however, that certain common environmental pollutants can also increase the risk of developing diabetes.

I've long been a proponent of clean water. It's gotten to the point that unless you can routinely and thoroughly test your water for contaminants and know for certain it's clean and pure, the use of



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*You will observe with concern how long a useful truth may be known, and exist, before it is generally received and practiced on. — Benjamin Franklin*



distilled water is a must. I've been telling people to distill their own water for years—long before we began to discover just how serious the contamination problem is.

With the tens of thousands of chemicals, pesticides, and herbicides being released into the environment, along with all the hormones, medications, and other toxins being flushed down the toilet every day, it's almost impossible to adequately test most water supplies. Keep in mind that most municipal water suppliers test for 8 or 10 contaminants at most (lead, arsenic, nitrates, et cetera), and their main focus is still on pathogenic bacteria.

I could write volumes on various contaminants found in water and the resulting problems that occur. One of the more common contaminants is a substance called bisphenol A (BPA). What makes this chemical stand out is the fact that it is one of the components of many plastics, including those found in most baby bottles and *plastic water bottles*. It is also one of the components used in the lining of hundreds of millions of food cans and in dental sealants. Bisphenol A is one of the most commonly produced chemicals in the world, so I'm sure there are dozens of ways we're exposed to it.

Researchers in Spain discovered that bisphenol A can leach out of plastic bottles into the liquid they contain. The plastic from the bottles you purchase at the corner store and see everyone sipping from these days could leach into the drink and cause very serious problems.

It's difficult to know which bottles are experiencing this leaching. Heat, wear and tear, longer storage, and the use of harsh cleansers make the problem worse. In 2000, Consumers Union found BPA in 8 out of the 10 five-gallon water jugs they tested. Beverages packaged in glass bottles are safer. If you pack your own drink to take with you on the road, it's best not to reuse plastic bottles. Instead, use glass or stainless steel. One alternative is a water bottle from a company called New Wave. It's made from the same grade of stainless steel used in commercial cookware, and is practically indestructible. Even if you drop it, the worst that will happen is a small dent. To find a supplier get in touch with New Wave Enviro Products, [www.NewWaveEnviro.com](http://www.NewWaveEnviro.com) or 800-592-8371.

Among other problems these researchers discovered is the fact that bisphenol A mimics estrogen and can wreak all sorts of havoc in the body's endocrine system. In an animal study the researchers found that even a single low dose of BPA caused a rapid increase in blood insulin levels. And after only four days of treatment with the low dose of BPA, the animals developed a chronic state of hyperinsulinemia—resulting in insulin resistance, the tell-tale precursor of type 2 diabetes. (*Environ Health Perspect* 06;114:106–112)

Another study has now linked BPA to triggering the same chromosome error that causes miscarriages and birth defects in humans, such as Down syndrome. (*Curr Biol* 03;(7):546–553)

Additionally, low-level exposure to BPA has been implicated in prostate tumors, adverse effects on prostate and breast tissue development, decreased sperm count, the rate of sexual maturation, and even the development of excess fat formation—which leads to obesity.

I've never been a big fan of bottled drinking water—not for health reasons but because I remember the “good ol’ days.” When I was growing up, water wasn't a problem (or, more likely, we just didn't know it was a problem). Every gas station had a cold water fountain and every restaurant served a huge glass of ice water the minute you sat down. That was before bottled water came on the scene. Things have certainly changed.

## There's Nowhere to Hide

You would think that if you pay more for a liter of bottled water than you do for a liter of gasoline it would be safe and pure. Unfortunately that's not the case. I would also like to think that some of us have escaped exposure to environment pollutants. The more I research the topic, however, the less likely that looks. One recent study collected the gonads (reproductive organs) of 55 male and 44 female polar bears that had been killed legally by subsistence hunters. They then tested fat from each bear for the presence of various pollutants known to affect sex hormones—everything from DDT and PCBs



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Dr. Williams works closely with Mountain Home Nutritionals, a division of Doctors' Preferred, LLC and subsidiary of Healthy Directions, LLC, developing his unique formulations that supply many of the hard-to-find nutrients he recommends. Dr. Williams is compensated by Doctors' Preferred, LLC on the sales of these nutritional supplements and health products, which allows him to continue devoting his life to worldwide research and the development of innovative, effective health solutions.



to PBDE (flame retardants) and chlordane (which was used to treat termite infestations before it was banned).

They found that the testes and the bone that supports the penis were smaller in male bears that had higher concentrations of the above chemicals. The researchers found similar problems in the female bears with high pollutant levels. (*Environ Sci Technol* 06;40(18:5668–5674)

Their findings revealed that polar bear reproduction is being impaired by chemicals used as flame retardants and termite poison. I don't think anyone would be using either of these types of chemicals, particularly termite poison, around polar bears living above the Arctic Circle. By the way, these same researchers also found mercury in polar bear hair and pollutants in Greenland sledge dogs. I thought I lived in a remote area, but if polar bears are being exposed to these chemicals I have no doubt that you and I are in the same boat....or maybe I should say soup. I guess the old saying, "you can run but you can't hide," is true when it comes to pollutants.

I'll continue to help you avoid as many of these problems as possible. In the future I'll also cover different methods you can use to help detoxify your body. I think the avoidance and elimination of contaminants will be one area that we need to seriously explore.

## A Visceral Reaction

Going back to the subject of metabolic syndrome I mentioned earlier, you should be aware that in addition to an "early warning sign" of diabetes it can also be an indication of impending heart disease. In fact, many people discover they are diabetic only after they experience a heart attack.

One Swedish study revealed that as many as 40 percent of those patients who were admitted with acute myocardial infarction (heart attack) were diabetic but didn't know it. (*Lancet* 02;359(9324):2140–2144)

One of the signs of metabolic syndrome is the accumulation of abdominal fat. It's been well documented that having a pear-shaped body (smaller waist but larger hips) is healthier than having an apple-shaped body (more fat at the waist). But what complicates matters slightly is that not all abdominal fat is created equal.

Fat can develop in three different compartments of the abdominal region: abdominal (stored between the skin and the abdominal wall), visceral (in and around the internal organs), and retroperitoneal (the back and sides or what we commonly refer to as "love handles"). Fat in each of these areas has its own metabolic reaction, as well as its own contribution to disease.

You might have noticed that love-handle fat is often the hardest to get rid of—even after intense exercising and successful weight loss. That's because it's the least active metabolically.

The abdominal fat is often used as an indicator of metabolic syndrome. You've probably heard the "pinch an inch" phrase. It refers to the idea that if you can pinch more than an inch of abdominal fat you're at an increased risk of developing diabetes and heart disease due to metabolic syndrome. Using this criteria among the general population, it's easy to see why diabetes and heart disease are so common.

Researchers, however, have recently discovered that the amount of visceral fat is probably the best indicator of your risk for these diseases. The relationship makes sense when you consider that the veins of the internal organs drain into the liver and visceral fat is the only type that shares this circulation. The liver connection is what makes excess visceral fat so dangerous.

Obviously, much of the fat accumulation problem originates in the diet (i.e., too much highly refined sugar and carbohydrates and too little fiber).

When you eat sugar, flour, or other refined carbohydrates, some of the digested sugars are used for your immediate energy needs. Any excess is converted to fat or fatty molecules called triglycerides, which are stored in fat cells for later use. Excess triglycerides in the blood are transported by the "good" cholesterol, the HDL form. HDL "attaches" to the triglycerides and tries to lower blood levels by taking them back to the liver. If you have low levels of HDL cholesterol, if your diet is high in refined carbohydrates, or if you're diabetic, you may experience abnormally high triglyceride levels. While normal amounts of triglycerides are essential for good health, elevated triglycerides and other blood fats are associated with higher risk for diabetes and heart disease.

As I've mentioned many times before, there are good fats and bad fats. In simple terms, the most harmful types of fat are the tiny droplets that can accumulate in the liver, organs, and other tissues in the abdominal area. They are responsible for creating a condition called insulin resistance (which is when cells in the body become resistant to the effects of insulin). In other words, insulin's effect is reduced and higher levels are required for it to have any effect.

## Resisting the Call

Insulin plays a key role in the metabolism of carbohydrates, fats, and proteins. It even helps regulate cell growth in the body. One of insulin's many jobs is





## NEWS TO USE FROM AROUND THE WORLD

### Being a Fathead Is a Good Thing

ROTTERDAM, NETHERLANDS—For years I've been saying that cholesterol is not really the problem when it comes to heart disease—the trouble comes when the cholesterol oxidizes and accumulates in arterial walls. In fact, cholesterol is necessary for proper functioning of many body systems, from skin health to sex hormones.

Now a study at the Erasmus Medical Center here has uncovered a relationship between cholesterol and brain health. Researchers followed over 6,000 people for an average of 9.4 years, and found that roughly a 15 percent increase in cholesterol levels decreased the risk of Parkinson's disease by about a fourth—but only in women. (*Am J Epidemiol* 06;PMID 16905642 [epub ahead of print])

The investigators aren't sure about the mechanism involved. Their first thought was that Parkinson's is somehow related to cholesterol and its metabolism, but the blood-brain barrier keeps out most of the lipoproteins (the "L" at the end of LDL and HDL) that carry cholesterol through the bloodstream. (Most of the large amount of cholesterol found in brain tissue is made there instead of being brought in by the blood.) As a result, it's unlikely that simple changes in the amount of cholesterol in the rest of your body could affect what's happening in your brain.

The other possibility is that the cholesterol level is only an indicator of something else going on. Cholesterol is created in the same biological pathway that creates coenzyme Q10 (which is why the statin drugs that block cholesterol production also reduce

your body's levels of CoQ10). People who are taking excessive steps to lower their cholesterol may also be lowering their production of CoQ10. (The association between cholesterol levels and CoQ10 production is stronger in women than in men, which may help explain why the cholesterol-Parkinson's link was seen only in women.)

Parkinson's arises when an area of the brain called the *substantia nigra* stops producing enough dopamine. A lack of dopamine affects your ability to walk or speak, and eventually even your ability to think or feel emotions can fall. A high blood level of CoQ10 protects the cells that generate dopamine. (*Biofactors* 99;9:267–272)

I wouldn't say that you should ignore your cholesterol level completely. It is possible to have too much of a good thing. It's also possible for you (or more likely your doctor) to go overboard in addressing it. If your cholesterol level is in the 300s or higher, you should certainly address it. The more total cholesterol you have, the more there is to become oxidized and collect in your arteries. Levels at or around 200 or so shouldn't cause you concern, though. A healthy diet and adequate physical activity will keep your blood lipid levels in check without interfering with your CoQ10 production.

In the meantime, it wouldn't hurt to add some CoQ10 to your daily routine. It's well absorbed into brain tissue, even in people who already have Parkinson's. (However, there's no evidence to suggest that it will reverse existing disease.) It's cheap protection—just the kind I like.

to "open" the walls of muscle and fat cells and cause them to remove glucose from the blood. This process is one of the ways your body controls blood sugar levels. Insulin acts sort of like the policemen you see on the television show *COPS*. To lower blood sugar levels, it knocks on the door of muscle and fat cells. When the cells become more resistant to insulin, the body requires that the pancreas send out more insulin to get the job done.

As resistance continues to build, more and more insulin is needed to knock down the door. Eventually, when the pancreas can't produce enough insulin, the blood sugar levels begin to rise. At first this increase in glucose happens just after meals. Later, it stays high even during the fasting state—which is when you have a diagnosis of diabetes. You can generally see the signs of insulin resistance long before someone actually develops diabetes.

Some of these signs and symptoms include:

- **Heart or vascular disease**—This occurs due to the inability of your body to properly deal with lipids or fats, resulting in high blood pressure, heart attack, stroke, angina, coronary artery disease, and peripheral vascular disease.
- **Fatty liver**—The liver begins to accumulate fat, most likely from the dysfunctional visceral abdominal fat stores that have accumulated. (As a side note, a study that examined the autopsied livers of 742 children in the San Diego area found that more than 13 percent of them had fatty livers. Even after adjusting for ethnic differences between the sample and the general population, *that's* still nearly ten percent of all children ages 2 to 19. Remember that veins from visceral fat feed directly into the liver. The authors noted that the primary cause of fatty liver in children was obesity.) (*Pediatrics* 06;118:1388–1393)



- **Skin lesions**—The connection isn't totally understood, but a couple of different types of skin problems are commonly related to insulin resistance.
  - **Skin tags:** These can vary greatly in size, shape and color, but they consist of a bit of skin that projects out from the surrounding skin. They can be smooth, rough, irregular, flesh colored, or darkly pigmented. They can be a simple elevation or attached with a stalk-like structure.
  - **Acanthosis nigricans:** This is a condition where the skin darkens in the creases of areas like the neck or armpits.
- **Reproductive problems in women**—Infertility, as well as menstrual abnormality, irregularity, or complete cessation.
- **Polycystic ovary disease**
- **Overproduction of male hormones in women**

The increase in insulin also triggers the constriction of blood vessels and promotes clotting, leading to higher blood pressures and restriction of blood flow to the heart, which can trigger a heart attack. Basically, anything you can do to increase the efficiency of insulin and/or decrease your body's need for the hormone will improve your health and extend your life. That's why simple things such as eating grapefruit and/or drinking grapefruit juice can become so important.

## Turn Up the Heat for Health

I've also discussed at length in previous articles how cinnamon increases the efficiency of insulin and can help prevent pancreatic and diabetes problems. Another inexpensive "poor man's insulin" might be cayenne pepper.

Researchers in Tasmania, Australia recently sent me details of their work in which they tested the effects of combining cayenne pepper with meals. The study revealed that even one meal with the pepper had an immediate effect, but it only lasted for a short period. They compared several different scenarios, but the most effective program by far at mitigating an insulin surge following meals involved taking about 4 grams of cayenne pepper with each meal. Individuals who followed this program produced about one-third less insulin. The greatest benefits were seen in the obese participants. (*Am J Clin Nutr* 06;84(1):63–69)

I don't know how practical it is to take 4 grams of cayenne pepper with each meal. Obviously, most people would need to take this in capsules (except for those meals of boiled crawfish where the pepper flows rather freely over the "bugs"). However, by using cayenne pepper occasionally, and cinnamon or grapefruit at other times, you might be able to help prevent diabetes or even keep a mild diabetes problem under control. We contin-

ue to discover that the best results for any health problem seem to come from a varied diet—and that appears to be the case with spices as well as with foods.

## Getting Rid of the Gut

When you understand the connection between insulin's effects and body fat, it's much easier to understand how losing just a few pounds of visceral fat can have such a profound effect on diabetes. A few pounds may be just a small percentage of total body weight but it could be a large percentage of visceral fat.

Researchers have discovered that dieting alone isn't an effective way to get rid of visceral fat. It will reduce the subcutaneous fat (the fat between the skin and the abdominal wall), but that fat is less harmful than the fat within and surrounding the internal organs. To remove visceral fat, exercise is more important than dieting.

While weight loss by any means is beneficial in these cases, "high-intensity exercise seems to preferentially reduce visceral fat." (*J Clin Endocrinol Metab* 04;89(11):55517–55522) (*J Clin Endocrinol Metab* 04;89(4):1739–1746)

Also keep in mind that research has shown that eating at night causes an increase in the production and release of insulin—which makes glucose intake more efficient, resulting in the accumulation of intra-abdominal fat. In other words, it really is true that the later you eat, the more likely you are to gain fat in the abdominal area. (*Briefing to the British Society for Neuroendocrinology* June 09, 2006)

## Cleansing the Passage

There's another very effective method of reducing abdominal fat build-up that's fallen out of favor during the last couple of decades—fiber.

Increasing the fiber in your diet is one of the least expensive, yet most successful, tools you can utilize to help combat obesity and address most of the problems associated with metabolic syndrome.

High-fiber foods are harder for your body to break down and are digested much more slowly than low-fiber foods. As such, they move out of the stomach more slowly, and since they have more bulk they also convey a sense of fullness and satiety. Nutrients are absorbed into the blood stream more slowly, naturally regulating blood sugar levels. This lower need for insulin reduces the possibility of developing insulin resistance and diabetes.

Fiber, which is sometimes referred to as roughage, is the indigestible part of the plant that provides its structure. Fiber acts like a sponge, absorbing many times its



Whole grains (barley), 1 cup	6.5 grams
Bran cereals (All-Bran, Oat Bran), ½ cup	4-10 grams
Berries (blueberry, blackberry, strawberry), 1 cup	4-5 grams
Nuts (almonds, hazelnuts, macadamias, pecans), 1 oz.	2.5-4 grams
Beans and legumes, cooked (chick peas, lentils, navy beans), 1 cup	7-11 grams
Fruits, dried (apricots, figs, prunes, raisins), ½ cup	4-6 grams
Fruits, whole (apple or pear with skin, kiwi, orange)	3-5 grams
Vegetables, raw (broccoli, carrots) 1 cup	3-4 grams
Vegetables, cooked (beets, cabbage, peas), 1 cup	4-6 grams

#### *Common Foods That Are Relatively High in Fiber*

own weight in water, which aids in the removal of toxins and waste material.

As it passes through the digestive system, fiber “scrubs” the intestinal walls. It also stretches the intestinal walls, which then stimulates peristaltic muscle movements within the bowel to decrease bowel transit time. In lay terms, fiber promotes easier, more frequent bowel movements and helps correct constipation problems.

It’s the cumulative effect of all these benefits that makes a high-fiber diet one of the best ways to correct the problems associated with metabolic syndrome. As a result, you can dramatically reduce your risk of cardiovascular disease and diabetes—as well as correct or prevent constipation, hemorrhoids, irritable bowel syndrome, diverticulosis, colon polyps, and colon cancer.

A hundred years ago individuals in this country ate an average of 28 grams of fiber a day. It’s estimated that we now consume only between 12 and 17 grams a day. Considering that a high-fiber diet is probably one of the very best ways to lose excess weight, I find it interesting that the four most popular diets—Atkins, Weight Watchers, Zone, and Ornish—provide only an average of 15 grams per day. (*JAMA* 05;293(1):43-53)

At the very least, you should be getting around 25 grams of fiber in your diet each day. This is best obtained through whole grains (bran cereals are excellent fiber sources), berries, nuts, legumes, fruits with the skin and pulp, raw vegetables, et cetera.

You can see from the information in the chart to the left that it doesn’t have to be a chore to get your full daily dose of fiber. A bowl of high-fiber cereal in the morning, some beans for dinner, and a couple pieces of fruit through the day will give you most of what you need.

As I mentioned earlier, one of the best things about a high fiber diet is the constant feeling of satiety. You go about your day feeling full and satisfied. If you’re someone who’s hungry all the time, it’s a pretty good bet you’re eating a low-fiber, high-carbohydrate diet that subjects you to the spikes and dips of fluctuating blood sugar and the associated cravings.

#### **Some Last Ideas**

Another tool that helps target visceral abdominal fat is CLA or conjugated linoleic acid. I’ve recommended this product in the past as a way to reduce body fat and add lean muscle. Based on its extensive research data, I recommend 3 grams daily of Tonalin CLA.

The hormonal supplement DHEA at 50 mg daily has been also shown to help reduce abdominal fat. This hormone is naturally created in your body by the adrenal glands. Personally, I prefer to improve adrenal gland function and let the body increase DHEA production

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rather than supplement with the hormone. DHEA has been shown to increase estrogen in men and women and testosterone in men. It is thought that estrogen may be the protecting factor in women that helps prevent a buildup of abdominal fat—which helps explain why the buildup will often occur following menopause or in women with hormonal imbalances. (*JAMA* 04;292:2243-2248)

Green tea and green tea extracts may also be of help. There are several so-called thermogenic compounds now available, with green tea extracts being one. The difference, however, seems to be that components of green tea specifically target abdominal fat.

I know that sometimes it sounds like I'm devoting an excessive amount of time to writing about diabetes, but I truly believe that it's going to be the number-one killer of Americans in the not-too-distant future.

It's never too early to start paying at least some attention to your blood sugar. As I've said many times, diabetes is showing up in pre-teens. And it's never too late to start doing something about your blood sugar levels.

## The Family That Takes Pills Together...

Apparently, attention deficit hyperactivity disorder (ADHD) is becoming a family affair. One pharmacy benefit manager, Medco Health Solutions, tracked the 2005 records of more than 100,000 children and then looked at the prescribing history for the parents and siblings of each child.

In 25 percent of twins and in 11 percent of sibling pairs, both children were taking a drug for ADHD. Additionally, parents of children who were taking these medications were about nine times more likely to be taking similar medications than were the parents of children who didn't take drugs for ADHD.

I can't say that I'm really surprised by these numbers. It figures that people who are willing to drug their own kids are more likely to turn to a pharmaceutical solution themselves. There seemed to be a mix of motivations for the adult usage. Some parents wanted to try the drugs themselves before accepting any use in their children. Other parents saw the drugs' effects on their children and thought they might benefit, too.

Some researchers claim that there's a genetic cause for ADHD. There's strong evidence that the identifying behaviors run in families, but it's just as likely that the cause is rooted in a family's lifestyle. The inability to focus, lapses in concentration, impulsivity, and general

"brain fog" are classic signs of other causes—particularly food allergies and problems regulating blood sugar.

Intolerance of certain foods such as wheat or dairy *does* have a genetic basis, so it isn't a surprise that family members who all eat the same foods display ADHD-like behaviors that are actually caused by food allergies. Likewise, if everyone is eating a diet high in simple carbs and low in fiber, they may all display some degree of brain fog as they lose control over their blood sugar levels.

## Ditch the Pill, Cure the Ill

ADHD used to be considered a "disease" of healthy, active boys, but that trend is beginning to change. Other data from the same pharmacy management group showed that use of the drugs is greater among boys by a margin of three to one but that the rate of use is climbing faster among females of all ages than it is for males. The group with the highest rate of increase was women in the 20–44 age group, with a growth of 164 percent between 2000 and 2005.

A study currently underway at the University of Maryland is investigating the effects of medication for ADHD on the mothers of children who also have ADHD. (Not coincidentally, the funding for this research is coming from the makers of the studied drug—one of the more popular ones for ADHD.) Fifty-eight percent of the parents of kids taking ADHD drugs and who were taking similar drugs themselves were mothers.

If ADHD actually exists at all, prescription drugs are not the way for anyone to manage it. Some of the symptoms of the "condition"—memory problems, compulsive actions, et cetera—sound like the typical life of stressed-out young parents. A more suitable solution would be some form of stress relief.

As I can attest, being a parent is a never-ending concern. It's easy to get so caught up in the daily worries of providing for your children that you forget to provide for yourself. If you're starting to see signs in your children or grandchildren of what teachers or doctors call ADHD, then it may be time to get your own life in order.

Good mental health requires that you occasionally get away from your problems and cares. Physical exercise is one reliable way to shift your focus (and it provides plenty of other benefits as well), but some people prefer more mental activities. Meditation, a good massage, or simply sitting alone with a good book for a bit can be enough to keep you on track.

It can also be useful to pay attention to your nutrition. Stress burns up B vitamins, and a B vitamin deficiency can lead directly to behavioral problems—causing more



stress, further vitamin depletion, et cetera. The solution can be as straightforward as a good multivitamin program that includes plenty of B vitamins.

As I mentioned earlier, diet can play a part in behavioral problems. Numerous studies over the years have shown that even the worst behavior—what in earlier days would have been called “juvenile delinquency”—can be reversed through dietary changes. All of us get benefits from a diet that’s high in fiber and good-quality protein but low in refined carbohydrates. However, the changes can be most dramatic in children. As their blood sugar levels normalize, their self-control and their ability to concentrate improves.

If further help seems in order, then you can begin a food-elimination diet to check for the presence of food allergies. A bland diet of chicken and lamb, carrots and cabbage, apricots and dates, and mineral water doesn’t sound very appetizing, but it can be a good way to start looking for food allergens. As you slowly add foods back to the diet at a rate of one food a week, pay close attention for the return of any of the previous behaviors. If you identify a particular food as a troublemaker, then you can pull it back out of the diet and move on. Restrictions like this may seem a bit dire, but if the alternative is poor behavior, social troubles, and constant stress, then many people will find the tradeoff worthwhile.

## Show How Much You Care

There’s no stronger reminder of how rapidly you’re aging than watching how quickly your children grow up. Our youngest son will soon be turning three, and even though he matures a little more each day he will always be one of our “babies.” As parents we always feel the need to protect our babies. This sense particularly hits home every time I strap him into his car seat and wonder if I’ve done everything possible to protect him. Results of a new study have eased the stress somewhat by confirming that the middle back seat is the safest seat in the car.

University of Buffalo researchers studied all car crashes involving a fatality in the US between 2000 and 2003

in which there was an occupant in the rear middle seat. They discovered that the occupants in the back seat are 56 percent to 86 percent safer than the passengers in the front seat. And, the person in the middle back seat is 25 percent safer than the other back seat passengers.

When all factors were considered, the middle back seat was by far the safest seat in the car. First, this position has a larger “crush zone,” the area of the car designed to help absorb the impact—which is particularly true with side impact crashes. Second, in rollover crashes there is less rotational force on the middle passenger than on passengers near the window. While the middle seat is usually the least comfortable and the least desirable among both children and adults, it is definitely the safest.

While we’re on the subject, I should mention some earlier findings from these same researchers on seat belt use among rear passengers. It should be a “no-brainer” that survival rates from crashes increase dramatically when everyone wears a seat belt, regardless of where they sit. But most state laws address only front passengers and seat belts. Keep in mind that even if you’re in the front with your seat belt on, your chance of surviving a head-on crash drops dramatically if the rear passengers are unbuckled. In effect, they become “back seat bullets.”

An earlier study analyzed information from every fatal crash in the US between 1995 and 2001. It was found that the odds of death for a belted driver seated directly in front of an unrestrained passenger was 2.27 times higher than if seated in front of a restrained passenger. Side impact crashes didn’t result in an increased risk. (*Acad Emerg Med* 05;12(2):130–134)

I guess the lesson to be learned is that it’s safest to sit in the middle (with your seat belt on, of course) if you ride in the back seat. (It’s also the best place to put the car seat for children.) And, next time you’re in the front and buckle up, do yourself and the passengers behind you a favor by asking them to buckle their seat belts as well.

Take care,

*Dr. David Williams*

If you have questions or comments for Dr. Williams, please send them to the mail or e-mail addresses listed to the right. Of course, practical and ethical constraints prevent him from answering personal medical questions by mail or e-mail, but he’ll answer as many as he can in the Mailbox section of *Alternatives*. For our part, we’ll do our best to direct you to his issues, reports, and products related to the subject of your interest.

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# Alternatives<sup>®</sup>

FOR THE HEALTH-CONSCIOUS INDIVIDUAL

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Dr. David G. Williams  
circa 2001

## Preparedness Is Your Responsibility

**M**y heart and prayers go out to the many thousands who have suffered recently on the Gulf Coast. Watching the news coverage of the two hurricanes and their aftermath brought back vivid memories of my personal experiences of traveling in

numerous third-world countries. I don't think most people in our country realize just how fragile the social order actually is, and how quickly disaster, chaos, and panic can disrupt it.

We have several advantages over those in third-world countries, however, when faced with these circumstances. For one, we have an infrastructure in place that we could (and should) be utilizing to help prepare us for future catastrophes. For many individuals in many parts of the world, preparation for future events isn't an option—trying to survive each day is the primary concern. In this country, we live with the hope and the expectation that “help” will be on the way, an idea that's either a totally foreign concept or far from certain in many parts of the world.

My reason for discussing this is not to point out how naïve we are in this country (although I personally feel that's often the case), nor to illustrate how fortunate we are in contrast to other societies. Instead, it's my hope that we can learn from these events and from the individuals who have to deal with many of these same problems just to survive on a daily basis. Because surviving from day to day is exactly what is required when you are faced with circumstances like these. While I don't want to be a doomsayer in any sense of the word, I am a realist. And in this day and age, I strongly feel it's imperative that you're aware of certain steps you can take that will allow both you and your family to survive

a catastrophe—whether it's a natural disaster, a viral pandemic, a nuclear attack, or whatever.

I've covered several “survival” tactics in past issues, and I'll continue to do so as they come to my attention. For instance, in the north, peanut butter and a sleeping bag (or a three-dollar “space blanket”) can be winter lifesavers that should be stored in the trunk of your car. Hopefully, these will just be interesting tidbits that you won't have to use but that you can discuss at leisure with your friends and neighbors. However, to borrow one of my dad's sayings, “It's cheap insurance,” and it's best to be prepared.

## All Life Begins with Water

One of your greatest needs in times of disaster is drinking water. If you live in a city (as opposed to having your own well and water storage system), the availability of clean drinking water is particularly problematic. As power systems fail and pumping and pressure systems no longer work, municipal water systems quickly become useless. In some cases, like parts of New Orleans, you could have the additional concern of the

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*You will observe with concern how long a useful truth may be known, and exist, before it is generally received and practiced on.—Benjamin Franklin*



water being highly contaminated. Bottled water was one of the primary looted items immediately after the hurricane. Not clothes, not computers, not televisions or stereos—water. I live fairly close to San Antonio, Texas, which is normally a three-hour drive from Houston. But during the evacuation for Hurricane Rita, it took anywhere from 8 to 14 hours to drive—and the stores in San Antonio were sold out of bottled water.

In the past, I've covered various ways to filter and purify contaminated water [*Editor's note: See Vol. 9 No. 21 and Vol. 10, No. 23*], but there is one simple and economic practice I have not covered. If you have any warning of an impending crisis, you should store large amounts of drinking water.

It's a good idea to keep several boxes of new, clean, white trash bags on hand. Place opened bags in your empty dresser drawers, cardboard boxes, and other empty containers (anything that will help support the empty bag once you fill it with water). Then, take each container to the bathtub and fill the bag with water from the tap while you still have electricity and water pressure—but be sure you don't fill the bag so full that you won't be able to lift the supporting container out of the tub.

Using this method, it's easy to store several hundred gallons in a relatively short period of time. If you can avoid it, you certainly don't want to be on the street fighting for bottled water, or waiting in line for days for a delivery at the local Wal-Mart.

## Winding Up with an Emergency Radio

Another basic piece of equipment (along with flashlights, rechargeable batteries, et cetera) that I consider vital in any disaster or emergency situation is a radio. When the televisions and computers go off, most people lose their link to the outside world. Keeping abreast of what efforts are underway to restore power, order, et cetera is not only comforting, it's a big part of being able to adapt and survive. My favorite radios are those that have

built-in hand-crank generators so you're not relying on outside electricity or using up your batteries. Some also have built-in solar panels for recharging. With many, you not only receive the standard AM and FM radio stations, you can also receive the audio portion from local television channels 2 through 13, short-wave radio, and the NOAA national weather alerts.

I have a couple of these emergency radios, and a few flashlights with built-in hand chargers as well. My favorite radio is the Eton Grundig FR300. It is hand crank-powered, and has all the features I mentioned above except the short-wave reception. It does, however, include a built-in LED flashlight and an additional feature not found on most emergency radios, one that I particularly like, and which has been found to be very helpful in recent emergencies: a built-in cell phone charger that includes an assortment of charging adapters.

The retail price of this particular radio is around \$70, but you can often find it for closer to \$50. You should be able to find one at Circuit City or other electronics stores, or on the Internet at Amazon.com. One source, [www.NextPowerUSA.com](http://www.NextPowerUSA.com), sells it for about \$57.

(I don't want to be a radio critic, which certainly isn't my field, but I do want you to know that while I think these radios are good for emergencies, they're probably not ones you'll want to use on a day-to-day basis. The FM reception leaves a lot to be desired, and tuning in a particular station takes a little finesse—especially if you've gotten used to the digital tuning found in most car radios. For the price, however, I still think they are an excellent tool to have around in an emergency. And if you're looking for that Christmas present for someone difficult to buy for, this might be the item.)

I obviously can't cover all the information about survival here. There are volumes of information written about food storage, techniques, and tools



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for survival. If you want a quick lesson on what items are truly important in a short-term crisis, tape your refrigerator and freezer shut, turn off your water supply, and shut off all the electrical breakers except your refrigerator/freezer. Live under those circumstances for 24 to 48 hours and learn what changes and adjustments you need to make to survive. You'll probably be more prepared for a genuine emergency than 95 percent of the general population.

## The Great Skin Cancer Scandal

There are a lot of tales told about skin health. One of the most damaging is that sun exposure is bad for you. (As you'll see in a moment, this is simply not true.) Another is that once damage is done, it's done, and only a surgeon's scalpel can restore you to health. That tale isn't true, either.

A Canadian dermatologist, Dr. Gordon Telford, has developed a skin cream formulation that reportedly can decrease the incidence of actinic keratoses—precursors to squamous cell and basal cell carcinomas.

The vitamin A-, C-, and E-based cream was used by 50 of his own patients who had had skin cancer. They applied it three times a week for up to five years on skin cancer-prone areas (such as the face, neck, chest, and back of the hands). In the test group, the cream reduced the incidence of new actinic keratoses by 70 percent. In 400 other patients without skin cancer, he has reported a reduction of wrinkles and lines.

It's been known for some time that both vitamin C and vitamin A can help reduce sun-induced damage to the skin when applied topically. Dr. Telford believes the antioxidants prevent sun-induced

immunosuppression. His cream is amazingly simple: a non-allergenic skin cream as a base, plus vitamins A, C, and E, and zinc sulfate.

Dr. Telford is considering patenting the formula and selling it over the counter, but for now it isn't on the market. To me, it appears to be something you could easily make on your own. Put 2 oz. of skin cream in a sterile container, and mix in the additives: 14 grams (a rounded tablespoon) of vitamin C powder; 4,000 IU of vitamin E (the contents of ten 400-IU capsules); 60,000 IU of vitamin A (the contents of six 10,000-IU capsules [be sure to use retinyl palmitate rather than beta-carotene]); and 1.5 grams of zinc sulfate (the contents of seven 220-mg capsules).

## An Artful Skin Herb

Individuals who have already developed either squamous or basal cell forms of skin cancer may benefit from another approach—the use of the herb artemisinin, a compound extracted from the wormwood plant (*Artemisia annua*). Dr. Henry Lai of the University of Washington has been working with artemisinin for years, and he believes it can be a potent tool in the treatment of cancer.

Artemisinin reacts strongly with iron—which is found in cancerous cells in higher amounts than in normal cells. Dr. Lai and his colleagues are working on techniques in which artemisinin and iron are packaged together. Once the package is absorbed into the cancer cells, the iron is released and reacts with the artemisinin to release free radicals—selectively destroying the cancer while leaving healthy cells intact. (*Expert Opinion Ther Targets* 05;9(5):995–1007) (*Life Sci* 05;76(11):1267–1279) (*Cancer Letters* 95;98(1):83–87) (*Anticancer Res* 04;24(4):2277–2280)

Continued on page 37

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## NEWS TO USE FROM AROUND THE WORLD

### Add Oil for Your Inflammation

PHILADELPHIA, PA—Scientists have discovered that *extra virgin* olive oil contains a molecule that works in exactly the same fashion as ibuprofen at inhibiting two inflammation-inducing enzymes (COX-1 and COX-2). Ibuprofen, of course, is a widely used over-the-counter pain medication. Another COX inhibitor, aspirin, has also been shown to produce certain cardiovascular health benefits.

While on a recent trip to Italy, a US scientist noticed a stinging sensation after consuming extra virgin olive oil. He recognized it as the same sensation he had experienced during his studies of liquid ibuprofen. Subsequent analysis revealed that a compound called oleocanthal isolated from the olive oil was responsible. (*Nature* 05;437:45)

This compound helps further explain some of the many health benefits associated with a Mediterranean diet (which is rich in olive oil). However, I don't think you could effectively treat acute pain and inflammation strictly through the use of olive oil since the concentration of oleocanthal is quite low. Based on the research, if one and three-fourths ounces of extra virgin olive oil were consumed a day, the oleocanthal content would be equivalent to only about 10 percent of the adult recommended dosage of ibuprofen for pain relief—not nearly enough to treat, for example, a headache. On the other hand, regular consumption of extra-virgin olive oil would provide a continuous dose of this anti-inflammatory compound, which could have profound results over a period of time.

The key once again, as in exercise and supplement use, appears to be consistent, routine use. Oleocanthal is only one of the many beneficial compounds in olive oil—and I'm sure many more have yet to be discovered. For instance, we already know that extra-virgin olive oil is rich in disease-fighting antioxidants.

### Protecting the Protectors

Keep in mind, however, that antioxidants break down over time if they are exposed to light and/or oxygen. In a recent study, it was revealed that olive oil in clear bottles exhibited at least a 30 percent decrease in antioxidants, tocopherols, and carotenoids after 12 months under supermarket lighting. After just two months, the peroxide created by the oxidation of the oil was raised to the point that the oil could no longer be classified as "extra virgin." (*Eur Food Res Technol* 05;221:92)

For the maximum health benefits possible, be sure to purchase the freshest extra-virgin olive oil available. Then it's imperative that you store the oil properly. It should be stored in a coated, non-reactive metal con-

tainer—preferably stainless steel, but not in copper or iron. If that's not possible, then use ceramic or porcelain or, at the very least, use tinted glass containers and store the oil in the dark—but definitely not in plastic. The container should also be kept tightly capped.

The ideal temperature for storage is 57 degrees, but room temperature will work if it's kept in the dark. Refrigeration won't harm the oil, but it's generally not recommended since condensation may affect the flavor. (If you *do* refrigerate the oil, don't be alarmed when it begins to harden. That's natural, and the oil will return to its liquid state as it warms up.) High-quality oil should keep for 15 months to two years, but has its best flavor and nutritional benefits two to three months after pressing.

### Eggs for Your Eyes

BOSTON, MA—For longtime readers it might seem as if I've been mentioning the enormous benefits of eggs forever—but much of the public is still brainwashed with the idea that eggs are dangerous because of their high cholesterol content. Nothing could be further from the truth. Eggs are one of nature's most complete foods and an excellent source of protein and other nutrients.

The yolk of the egg contains lecithin—which is not only a key building block of cell membranes, but also a fat emulsifier. Due largely to an egg's lecithin content, researchers have demonstrated that the carotenoid present in eggs, called lutein, is more readily absorbed into the bloodstream than lutein from other sources. (The lecithin in eggs also balances out the high cholesterol content of the egg.)

In fact, research from Tufts University has now shown that the concentration of lutein in the blood serum of volunteers was three times greater after eating eggs than after consuming the same amount of lutein from other sources—including cooked spinach and two varieties of lutein supplements. (*J Nutr* 04;134(8):1887–1893)

Lutein is concentrated in the retina and the lens of the eye, and numerous studies have shown a link between it and the incidence and progression of various eye diseases—particularly cataracts and age-related macular degeneration (the leading cause of blindness in older Americans). I wouldn't be surprised if the widespread incidence of both of these two problems in the older population were linked to the "cholesterol scare" and the recommendations from doctors to avoid eggs for the last 20-plus years.

As we get older, many nutrients and foods can be harder to digest. Lutein may be one of these. While I still strongly suggest the regular use of good daily



## NEWS TO USE (CONTINUED)

supplements, never forget that nature has a way of combining the various antioxidants, vitamins, minerals, carotenoids, et cetera, into foods that make them more readily available to our bodies. One of these foods is the egg. Eat as many as you want, as often as you want them.

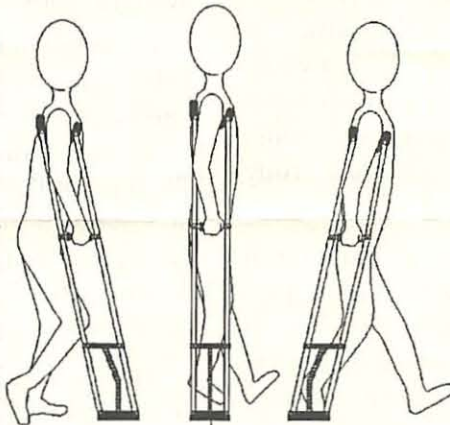
### Improved Support in Time of Need

KENSINGTON, MD—I owe the next information tidbit to a good friend of mine, Tom Palm, on the island of St. Croix in the US Virgin Islands. A couple of months ago when I ran into Tom, he was about to undergo hip surgery. He showed me a new set of “high tech” crutches that he had purchased called Strutters, which I’m sure could be a godsend to a lot of people.

It seems like crutch design hasn’t changed much over the last 150 years—crutches were first patented during the Civil War—until recent innovations made by the Orthotic Mobility company. The founder of the company, Harry Herman, developed Strutters after he broke his ankle several years ago and found he was unable to use the crutches available at the time.

It’s difficult to describe exactly how Strutters work. But it’s not difficult to describe the frustration of conventional crutches—particularly to anyone who’s had to use them. I still have vivid memories of the two or three times I had to use crutches. First, trying to balance on two small tips was a nightmare, especially on uneven or slick surfaces. Then, there was the pain, chafing, and soreness under the armpits to deal with.

On top of all that, I began to experience “crutch palsy,” which anyone who’s used crutches for a period of time is quite familiar with. Placing your weight on the top of the crutch can irritate the radial and axil-



lary nerves—which, in turn, can lead to hand and arm numbness (perhaps permanently). In an effort to eliminate crutch palsy, forearm crutches have been developed—but they can cause shoulder problems, which are almost impossible to correct, and wrist problems such as carpal tunnel syndrome.

Strutters differ from regular crutches in both their appearance and function. They are a lightweight (3.5 pounds per pair), aluminum, spring-assisted device that users say “walks with you.” The “foot and ankle” of the Strutter works much like the human foot with the “sole” having 18 square inches of high-tech surface material for traction in all terrain (compared to 1 to 2 square inches on normal crutch tips). They truly are a technological marvel. The best way to see the difference is to look at the photos on their Web site at [www.OrthoticMobility.com](http://www.OrthoticMobility.com), or give them a call at 888-667-4046 for more information or to locate a retailer that sells their products.

Although conventional, old-fashioned crutches are definitely less expensive, running anywhere from \$50 to \$175, it’s easy to see why spending \$475 could be well worth the money for many people. (Medicare will reportedly pay for as much as \$380 of the total cost.)

The Strutter has been a true innovation to many people young and old. It has helped a wide variety of individuals regain their mobility and sense of independence—including those with cerebral palsy, multiple sclerosis, cystic fibrosis, limb loss, spina bifida, or permanent joint, muscle, and nerve damage.

The company also makes a couple models of very innovative, shock-absorbing canes based on many of the same principles as the Strutter. (I recently purchased one for my father.) You can purchase all their products directly from their Web site or from a growing list of hospitals around the country.

*Continued from page 35*

There are also reports of using artemisinin with the solvent DMSO, which I’ve covered numerous times over the years [Editor’s note: see Vol. 6, No. 18], to help deliver the artemisinin directly into skin cancer cells. I’ve spoken with several individuals and doctors who have seen positive results using this technique. Noticeable, positive changes (or even elimination of the skin cancer) often occurs within as little as a week to 10 days. The contents of one artemisinin capsule is made into a paste by adding a drop or two of DMSO. Apply this paste to the skin cancer twice daily.

Artemisinin is available from Nutricology at [www.Nutricology.com](http://www.Nutricology.com) or at 800-545-9960. DMSO can be purchased at your local feed and farm animal supply store, or from DMSO Marketing, PO Box 4139, PVP, California, or 800-367-6935. I would recommend buying 99.9 percent DMSO and diluting it down to roughly 70 percent with distilled water.

I haven’t seen any work on whether the artemisinin/DMSO is effective in treating melanoma skin cancer. And, I doubt there will be any studies forthcoming anytime soon. Melanoma can spread so rapidly (and become fatal) that most doctors wouldn’t want to risk using experimental treatments.



## The Truth About the Melanoma Scare

Melanoma is the form of skin cancer the media likes to refer to when they want to scare the bejesus out of the public about the dangers of sun exposure. For instance, there have been recent reports of how the number of cases of melanoma has been steadily increasing over the last 20 years. Most dermatologists will say this increase is due to the fact that more people are getting far too much sun exposure in their younger years. A closer look at the matter, however, reveals a far different story.

Skin cancer awareness programs have been effective at increasing the number of patients undergoing full-body screening exams, and the result is a huge increase in the number of skin biopsies being performed. It seems that even with biopsies there is still considerable confusion and disagreement among pathologists when it comes to identifying melanoma. It's apparently not a cut-and-dried diagnosis. Looking at the same tissue, one pathologist will see a benign lesion while another will see it as melanoma. Thus, the dramatic increase in biopsies has led to more melanoma diagnoses—many of which are false, as a new study shows.

The study, conducted by doctors at Dartmouth Medical School, found that there has been a 250 percent increase in skin biopsies since 1986—which just happens to be roughly the same percentage increase in the number of people diagnosed with early-stage melanoma. These researchers became skeptical about the rise in melanoma after they noticed that over that time there hasn't been any increase in deaths from melanoma or any increase in the number of advanced cases of the disease. (*BMJ* 05;331(7518):698)

Plain and simple, there has not been an actual increase in the overall incidence of melanoma skin cancer. The apparent increase is due merely to improved detection because of the increased number of screening procedures and subsequent biopsies—which, by the way, hasn't led to any increase in survival or cure rates. Much like cancers of the prostate, breast, and lung, the more doctors look for cancer, the more likely they will find it—and the number of false diagnoses will also increase.

If you or someone you know is diagnosed with melanoma, I would definitely suggest getting a second opinion. The M. D. Anderson Cancer Center in Houston offers a second-opinion service that is

often covered by insurance. They can be contacted on their Web site at [www.MDAnderson.org](http://www.MDAnderson.org) or by phone at 713-792-3111.

## Curcumin or Curry for Cancer

On a related side note, researchers at the same Houston cancer center reported that curcumin—one of the compounds found in turmeric and curry powders—stops laboratory strains of melanoma from proliferating and causes the cancer cells to commit suicide. The findings are so dramatic that human clinical trials are already underway testing curcumin's ability to retard the growth of both pancreatic and breast cancer, and animal studies of its effects on melanoma will begin shortly. So far, the researchers have found that curcumin has had a positive effect on every tumor marker they've tried. By the way, all of these studies involve the use of daily oral curcumin supplements that are readily available today.

For years now, I've been recommending turmeric (which routinely contains between 2 and 5 percent curcumin) as one of the least expensive anti-cancer and anti-inflammatory supplements available. [See *The Test of Time* on page 39.] I'm sure consumption of curcumin from turmeric and curry is one of the primary reasons India has only one-tenth the incidence of the US for the four leading types of cancer found here—colon, breast, prostate, and lung.

The oral therapeutic dosage for cancer is considerably higher than the maintenance amount for prevention. Curcumin is non-toxic, so some cancer studies have used amounts as high as 3.6 grams per day (3,600 mg) while others are recommending a therapeutic dose of 3.6 grams taken 3 times a day for a total dosage of 10.8 grams.

From what I've seen, four to eight grams daily of 95 percent curcumin capsules is a pretty accepted cancer dosage. It has been reported that the addition of an extract of common black pepper called piperine increases the absorption and bioavailability of curcumin. Some manufacturers have since incorporated this extract into their products. One that I find reliable is called Super Curcumin with Bioperine, from Life Extension Foundation at [www.lef.org](http://www.lef.org) or 800-544-4440. They offer a bottle of 60 capsules with 900 mg of curcumin and 20 mg of piperine for \$22.00.

As for a maintenance dose for curcumin, that seems to vary also. What was interesting in the above M.D. Anderson study was their comment



# The Test of Time: *The Power of Curcumin*

**I**f you've ever eaten Indian food, you'll never forget the color, smell, and taste of curry. Curry is actually a combination of spices, one of which is turmeric (*Curcuma longa*). The compound curcumin is responsible for the yellowish-orange color and distinctive smell of turmeric. Curcumin is more than just a simple pigment, however. It is a very potent medicinal remedy with a wide variety of uses, some of which we've only discovered in the last few years.

The ancient practice of topically applying turmeric for strains, sprains, muscle aches, and joint pain has recently opened up a whole new area of research. A successful folk remedy in India is made with a paste of turmeric, a little powdered lime, and saltpeter. (Another recipe for topically applied paste calls for 2 tablespoons of turmeric powder and 1 tablespoon of lime juice. To this mixture a small amount of boiling water is added to help form a uniform thick paste.) The mixture is then applied to the painful area and held in place with either cheesecloth or plastic food wrap. This same compound is used in India to successfully treat skin lesions resulting from herpes, ringworm, insect bites, leprosy, and chickenpox.

We ran across an additional folk use for turmeric that may also prove useful. The powder

can be sprinkled directly on the skin to treat things like diaper rash, pimples, skin ulcers, psoriasis, and eczema. A little coconut oil can be added before applying to the skin to help hold the powder in place.

Turmeric is a strong antioxidant and free radical scavenger, but it also possesses amazing anti-inflammatory, anti-mutagenic, and other protective powers—and seems to be surprisingly potent and effective even at low dosages. Studied dosages are often somewhere in the range of 680 mg a day for a 150-pound individual. (The average daily adult intake in India is estimated at 400 mg.) Higher amounts were used in an Indian study involving 16 chronic smokers. They took 1.5 grams (1,500 mg) a day for 30 days. In every case, those on the turmeric had reduced urinary excretion of mutagens while there was no change in the control patients.

Turmeric is considered very safe. As with most herbal treatments, traditional healers recommend using it cautiously during pregnancy. It also has a tendency to increase the activity of the stomach lining, which could increase acid production—a definite benefit in some individuals and somewhat of an irritant to others.

*Tip from Vol. 5, May 1994*

stating the cancers were suppressed “by both short exposures to high concentrations of curcumin, as well as longer exposure to lower concentrations of curcumin.” The work of the researchers at the M.D. Anderson Cancer Center once again supports the idea that regular, routine consumption of curcumin in the diet and through supplementation may be the best form of prevention. Based on their research, a daily supplement that contains turmeric or curcumin (along with ingesting curry powders and turmeric in the diet) is a wise move.

Beyond the oral use of curcumin, a recent study shows that topical application can suppress the growth of squamous cell head and neck carcinoma. Researchers from the David Geffen School of Medicine at UCLA found that in three different cell lines, curcumin reduced the expression of growth factors. And mouse tumors stopped growing when curcumin was applied to them. (*Clin Cancer Res* 05;11:6994–7002)

Given these results, I would seriously consider changing the artemisinin paste I mentioned earlier, to use half a capsule of artemisinin and half a capsule of curcumin mixed with DMSO into a paste. (You can save the rest of the capsule contents to use in the next batch.)

## Let the Sun Shine In!

As I've said several times in the past, the public has heard only part of the story when it comes to the benefits of sunshine. Obviously, excessive exposure which results in sunburn isn't a benefit at all. However, moderate amounts of sunlight, along with a varied diet containing nature's natural, protective antioxidants, vitamins, and fatty acids (omega-3s) is actually beneficial and has been shown to help prevent many forms of cancer—including skin cancer. Lifetime sun exposure was actually shown to result in a lower risk of developing melanoma. (*J Invest Dermatol* 03;120(6):1087–1093)



Past studies have shown that individuals who utilize sun exposure reasonably have a lower incidence of colon and breast cancer, prostate cancer, multiple sclerosis, osteoporosis, hip and vertebra fractures, et cetera. As I've previously discussed, many of these results are related to vitamin D—which is necessary for enabling calcium to be absorbed from the gut. Deficiencies in vitamin D (which lower calcium availability) result in rickets, osteoporosis, and weak and fragile bones.

Calcium also has numerous functions in addition to bone formation. It has major metabolic roles in nerve and muscle function, and deficiencies can result in everything from muscle spasms, cataracts, and nerve diseases to high blood pressure and heart failure.

Over 20 years ago it was discovered that vitamin D has an "anti-proliferative" effect on cells. In other words, vitamin D can stop cells from multiplying out of control (i.e., from developing into cancer).

Your body has only two sources for vitamin D. The first is from oily foods (vitamin D is fat-soluble) such as oily fish, fortified dairy products, organ meats, and eggs. The second is from your own skin cells, which use the same "cancer-causing" UV rays from the sun to convert a form of cholesterol into vitamin D.

Not surprisingly, those who consume more fish and omega-3 foods have a reduced incidence of melanoma, while those consuming more of the omega-6 oils (the vegetable oils that are now so pervasive throughout our food supply) have increased rates of melanoma and other skin cancers.

I explained the vital connection between sunlight and vitamin D in earlier issues [*Editor's note: see Vol. 7, No. 13*], so I won't go deeply into that here. I do however want to mention a couple of other chemicals that your skin makes when it has adequate exposure to the UV rays of the sun.

## An Unsolved Mystery

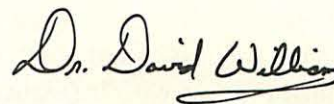
The function of two vitamin D-related compounds, lumisterol and tachysterol, isn't yet fully understood. It's possible that they're associated with helping prevent blood sugar problems and obesity. As we learn more about these two compounds, I suspect we'll find even more evidence that sunlight is a necessary component of optimum health.

We weren't made to live in caves or by the light of the moon. Sunlight provides us with far more benefits than just getting a tan. The pendulum has obviously swung too far on this topic, and it's time that the public be given both sides of the story. Only then will there be meaningful research into determining the optimal exposure needed to help prevent many of these diseases without causing any undue harm. The current message about sun exposure is that it's dangerous and should be avoided at all costs, but it's not such a black-and-white issue. Avoiding sunlight puts you at a far greater health risk than exposing yourself moderately.

Dr. William Grant, one of the top researchers on this subject, has studied the relationship between sunlight and health for years. He's found that 47,000 individuals in this country die from 16 different types of cancer due to insufficient vitamin D, whereas 8,000 die of melanoma and another 2,000 die from other skin cancers. Furthermore, pale skin, numerous moles, smoking, a diet high in fat and low in fruits and vegetables, and frequent sunburns are all stronger predictors of later skin cancer than UV exposure.

As with most things, moderation is the watchword. Enjoy your time in the sun every day (even as the days get shorter) and prepare your body with an adequate intake of the right fatty acids.

Take Care,



If you have questions or comments for Dr. Williams, please send them to the mail or e-mail addresses listed to the right. Of course, practical and ethical constraints prevent him from answering personal medical questions by mail or e-mail, but he'll answer as many as he can in the Mailbox section of *Alternatives*. For our part, we'll do our best to direct you to his issues, reports, and products related to the subject of your interest.

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